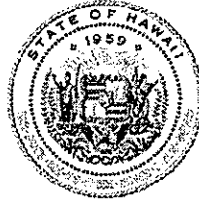
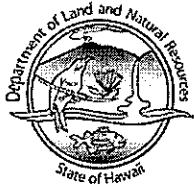


SCR 123

SR 86

**OPPOSING THE USE OF HYDRAULIC
FRACTURING IN HAWAII.**

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

**Testimony of
WILLIAM J. AILA, JR.
Chairperson**

**Before the Senate Committees on
ENERGY AND ENVIRONMENT
and
WATER AND LAND**

**Thursday, March 28, 2013
2:45 P.M.
State Capitol, Conference Room 225**

**In consideration of
SENATE CONCURRENT RESOLUTION 123/SENATE RESOLUTION 86
OPPOSING THE USE OF HYDRAULIC FRACTURING IN HAWAII**

Senate Concurrent Resolution 123/Senate Resolution 86 express the Legislature's opposition to the use of hydraulic fracturing - also known as "fracking" - in Hawaii. **The Department of Land and Natural Resources (Department) offers the following comments.**

The Department believes it is premature to preempt a technology that has not been investigated in the context of the Hawaii environment. The Department recommends further research and discussion among industry experts, the University of Hawaii Center for the Study of Active Volcanoes, and applicable regulatory agencies be performed before any such blanket prohibition against hydraulic fracturing is taken in Hawaii.

The Department appreciates the resolutions' intent to protect against potential adverse impacts to the environment from hydraulic fracturing operations generally associated with the oil and gas industry, and also recognizes the aim of the resolutions to protect of our State's natural resources and water supplies. Whereas, hydraulic fracturing has been utilized on a very limited basis in the geothermal industry, the Department is unaware of any proposed plans or assessment of potential sites for use of such techniques in Hawaii.

Hydraulic fracturing operations would require the use of an injection well and as such would be subject to existing State regulations, which safeguard our environment and statewide ground water supplies. The Department, together with the Department of Health (DOH), respectively provides regulatory oversight regarding the construction, operation, and monitoring of both production and underground injection wells.

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ESTHER KIA'AINA
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

If hydraulic fracturing operations were to take place in Hawaii, such action would require approval for use of injection wells and the introduction of fluids into the targeted formation. Such approvals would include the construction and monitoring of such wells, which are subject to review and permitting by the Department and/or the DOH.



SCR123 / SR86
OPPOSING THE USE OF HYDRAULIC FRACTURING IN HAWAII.
Senate Committee on Energy and Environment
Senate Committee on Water and Land

April 4, 2013

2:45 p.m.

Room 225

The Beneficiary Advocacy and Empowerment (BAE) Committee of the Office of Hawaiian Affairs (OHA) offers the following comments on SCR123 / SR86, which opposes the use of hydraulic fracturing or “fracking” in Hawai‘i.

The use of fracking to expand the ability to exploit fossil fuel resources is troubling. The demand for cheap energy has made it economically feasible to use fracking technology that appears to cause earthquakes and devastate water supplies. Proving that fracking causes this damage is difficult within our legal system and places an unconscionable burden on the health and safety of nearby communities and our sensitive watersheds.

Nevertheless, it may be premature to create an automatic ban on hydraulic fracturing technology because this technology is rapidly changing. Any ban could become a game of “whack-a-mole” as the legislature has to chase down changes in the description of drilling technologies or we find out that we have eliminated a positive derivative of this technology.

To the extent that Hawai‘i may move towards geothermal development using hydraulic fracturing techniques, OHA is adamant that there should be an open and transparent process for evaluation of geothermal exploration or development, particularly for proposals that will impact Hawai‘i’s most fragile lands and communities. Accordingly, experimenting with new technology in the most sensitive of protected regions, including fragile watershed areas and the habitats of threatened or endangered animal and plant species, may be unwise. Geothermal exploration and development may result in emission of noxious gases, water table disturbance, noise and ground surface disturbance. Due to these potential impacts, there needs to be an opportunity for public hearings in the proposed affected community and an opportunity for contested case hearing.

Mahalo for the opportunity to testify on this important measure.

Carlton Saito

From: Robert Petricci [nimo1767@gmail.com]
Sent: Wednesday, March 27, 2013 12:14 AM
To: ENETestimony
Subject: Testimony RE: SCR 123 / SR 86 ENE/WTL 225 Mar 28, 2013 2:45 PM

ENE/WTL 225 Mar 28, 2013 2:45 PM

Testimony RE: SCR 123 / SR 86

Position: Strong support

Robert Petricci

Representing: Puna Pono Alliance

Aloha

Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members.

Thank you for the opportunity to present testimony on this very important issue.

Puna Pono Alliance strongly supports SCR123 and SR86.

Puna Hawaii is a farming community that has been identified for further geothermal development. Puna is a very seismically and volcanically active area, PPA is extremely concerned about the implications fracking - Enhanced Geothermal Systems (EGS) has as it relates to induced seismicity (causing earthquakes) and the potential to pollute our ground water.

Before any hydraulic fracturing experiments are done in Hawaii, the legislature needs to look at the induced seismicity and water pollution that have occurred in other places where this technology has been allowed. Both on the mainland and around the world problems associated with hydraulic fracturing (fracking) have been well documented.

A working group should be formed that includes members of the environmental community to examine the dangers both seismically and environmentally that have been reported. The working group should consult with lawmakers and regulators that have banned this technology around the country and around the world. Why was this drilling technology banned? A project in California was abandoned and another closed down in Switzerland because of induced earthquakes and technical difficulties.

PPA supports SCR123 and SR86. On the mainland AltaRock Energy, the industry leader in geothermal hydraulic fracturing is already working with Ormat the parent company of Hawaii's PGV plant. Ormat is also involved in a project on Maui. AltaRock Energy and Ormat have projects together attempting to hydraulically fracture wells at Ormat geothermal projects in Nevada. AltaRock has been to Hawaii already even after they were forced to abandoned a project in California. Dr Don Thomas from UH Manoa has been quoted publicly in the media as supporting hydraulic fracturing in Hawaii. Dr. Thomas is currently working under a 2 million dollar state grant to do geothermal exploration here on Oahu.

In Basel Switzerland a \$60 million EGS power project was suspended in 2006 and finally shut down permanently in 2009 after a government study determined that earthquakes generated by the projects through induced seismicity caused about 9 million dollars in damage, and was likely to do millions of dollars in damage each year. These are things that need to be considered and taken seriously "before" fracking is allowed in Hawaii.

AltaRock Energy, started a EGS project in California financed with federal Department of Energy money at a site about 100 miles north of San Francisco. in 2009 Alta Rock informed federal officials that the government project would be abandoned after encountering crippling technical problems. AltaRock Energy's project collapse came the day after the Swiss government had permanently shut down the EGS project in Basel Switzerland, because of the damaging earthquakes it produced in 2006 and 2007. Residents of the area near the AltaRock project in California were quoted in the media as being relieved the project was shut down.

In Germany as well there has been concern about the earthquakes possibly associated with hydraulic fracturing (EGS).

More conventional geothermal in Hawaii has already experienced its own setbacks and problems including blowouts and other accidents that have occurred regularly. Geothermal development in Puna has resulted in heated community opposition. The existing PGV plant still has serious problems having vented toxic gasses into the community again 2 weeks ago on March 13 of this year. We need to ban fracking in Hawaii and a working group should be formed to issue a report to the legislature on the dangers and problems associated with this technology. If it is not being planned for Hawaii as some claim there is no reason not to ban it, if it is, we need to look at the dangers this technology presents to our island home.

Please support SCR 123 and SR 86 to protect Hawaii from fracking. On the mainland there are huge issues surrounding this type of technology. Residents of Hawaii do not support fracking here

Thank you for your consideration.

Robert Petricci
President Puna Pono Alliance

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Hank Fergerstrom	Na Kupuna Moku O Keawe	Support	No

Comments: With Hawaii's fragile eco system with limited natural resources such as water, we cannot afford to waste nor destroy our water resources, especially in our ISLANDS.

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Henry Curtis	Life of the Land	Support	Yes

Comments:

SR86

Submitted on: 4/2/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Rene Siracusa	Malama O Puna	Support	No

Comments: Malama O Puna is a Hawaii-based 501(c)(3) environmental organization with a membership base of approximately 1,350 households. We applaud the State Legislature for being proactive in taking up this measure. As we all know, the geology of these islands is volcanic in nature and differs greatly from mainland geology. Our substrate has been described as 'Swiss Cheese', indicating that it is not solid and impermeable. Indeed, biologists have found that the tiny 'opae 'ula (red shrimp) found in Ka'u are most closely related genetically to a population on O'ahu than they are to other Big Island populations. These tiny shrimp, found in anchialine ponds, travel through the fissures under the seabed between the islands. And other Big Island populations travel with the water from site to site, with related populations on the Puna coast and in Hawaii Volcanoes National Park. This kind of permeability will be impacted by hydraulic fracking - and any releases of chemicals, heavy metals, or other contaminants will, through this same mechanism, be able to enter our fresh water wells, watersheds, reservoirs and aquifers. The results would not only endanger public health, but also have negative consequences for the environment and, by extension, our economy (much of which depends on clean water). Thus, fracking would cost us more than it would gain us. Developers would be able to make informed decisions if their project included hydraulic fracking, and would certainly want to know that it is banned in Hawaii prior to investing large sums of money in such a project. So this legislation is a win-win for everyone. Thank you all for bringing it forward, and we urge you to pass this resolution for the future benefit of all stakeholders. Rene Siracusa President Malama O Puna

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Chama Cascade	Hawai'i Oasis	Oppose	No

Comments:

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Amara Karuna	Hawaii sustainable Community Alliance	Support	No

Comments: ENE/WTL 225 Mar 28, 2013 2:45 PM Testimony RE: SCR 123 / SR 86
 Position: Strong support Aloha Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. Please support this measure to protect our land from the dangers of fracking. Amara Karuna

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Donna Fischer	Amazon Power Plus	Support	No

Comments: 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. This could destabilize the substrate 3) There is a potential to pollute the ground water. please support this bill. Mahalo Donna Fischer

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Courtney Matson	GaiaYoga Gardens	Support	No

Comments: Testimony RE: SCR 123 / SR 86 Position: Strong support 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. This could destabilize the substrate 3) There is a potential to pollute the ground water. thank you Courtney Matson

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Dwayne Tarletz	GaiaYoga Nursery	Support	No

Comments: Hydraulic fracturing has been linked to seismic activity. Please don't risk this in our state. thank you Dwayne Tarletz

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Tracy Matfin	Laakea Educational Programs	Support	No

Comments: Please pass this bill! It is so important for the health of our people! Tracy Matfin

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Rob Long	Laakea Community LLC	Support	No

Comments: aloha, please support this bill. 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. This could destabilize the substrate 3) There is a potential to pollute the ground water. thanks Rob Long



Indigenous Consultants, LLC

Mililani B. Trask, Principal

P.O.Box 6377 ❖ Hilo, HI 96720

Mililani.trask@gmail.com



Bill: SCR 123
Committees: ENE/WTL
Hearing Date: Thursday, March 28, 2013
Hearing Room: CR 225
Time: 2:45

Aloha Legislators,

Indigenous Consultants (IC) is a Hawaii based, indigenous LLC owned and operated by Native Hawaiians. It was created to assist indigenous peoples in developing their renewable energy resources in ways that are: Culturally appropriate, environmentally green and sustainable, socially responsible and economically equitable and affordable. For several years the IC has worked with Innovations Development Group in New Zealand and indigenous Maori developing geothermal resources, which are trust assets of Maori Land Trusts. In addition, the IC has acted as a consultant to other indigenous people in Hawaii and Asia who are addressing development of their trust renewable energy resources in ways that; directly benefit their people, bring in revenues, create small business opportunities and ensure fair & affordable rates to consumers, including themselves and their communities.

IC strongly oppose this measure because it does not relate to geothermal development in Hawaii, is costly and is being proposed to generate fear & hysteria relating to a technology that simply is not being used, tested or considered for our State.

#1. Hydrofracking is a technology generally used in the testing & production of oil & gas. There is no oil or gas in Hawaii.

#2. No one is using hydrofracking in Hawaii & no one intends to. The proponents of this Resolution do not cite any evidence of this because there is none.

#3. Claims that Hawaii is currently “being assessed” as a potential site for this technology are false. Where is the evidence of this assertion in the Resolution? There is no evidence that this is occurring in Hawaii, and the possibility that this technology will be used in Hawaii are nil.

#4. Claims that hydrofracking is being tested in Enhanced Geothermal Systems (EGS) and so are applicable in Hawaii are false & not substantiated by science or current research. EGS technology is not appropriate in Hawaii because Hawaii has Volcanic soil that is permeable & Hawaii has significant rain fall. EGS applications are appropriate in the western continental USA where there is little or no rain & no permeable soils.

THE FACTS RE: HYDROFRACKING & EGS ARE THE FOLLOWING:

- A. The technique of hydraulic fracturing is used to increase or restore the rate at which fluids, such as petroleum, water, or natural gas can be recovered from subterranean natural reservoirs. Reservoirs are typically porous sandstones, limestones or dolomite rocks, but also include "unconventional reservoirs" such as shale rock or coal beds. Hydraulic fracturing enables the production of natural gas and oil from rock formations deep below the earth's surface (generally 5,000–20,000 feet (1,500–6,100 m)). At such depth, there may not be sufficient permeability or reservoir pressure to allow natural gas and oil to flow from the rock into the wellbore...
See ^ "Hydraulic fracturing research study" (PDF). EPA. June 2010. EPA/600/F-10/002. Retrieved 2012-12-26.
- B. While the main industrial use of hydraulic fracturing is in arousing production from oil and gas wells, hydraulic fracturing is also applied for heat extraction to produce electricity in an enhanced geothermal systems in areas of the US with low rainfall & soils that are impermeable. This does not apply in HAWAII.
See^ "Geothermal Technologies Program: How an Enhanced Geothermal System Works". .eere.energy.gov. 2011-02-16. Retrieved 2011-11-02 & Duchane article below.
- C. Research on the EGS applications of hydrofracking for geothermal development have already been assessed for the United States.
See Duchane, Dave; Brown, Don (December 2002), "Hot Dry Rock (HDR) Geothermal Energy Research and Development at Fenton Hill, New Mexico", *Geo-Heat Centre Quarterly Bulletin* (Klamath Falls, Oregon: Oregon Institute of Technology) 23 (4): 13–19, ISSN 0276-1084, retrieved 2009-05-05.

A map of the areas in the US where hydrofracking for EGS may be applicable has already been scientifically established. The map of this research shows these areas:

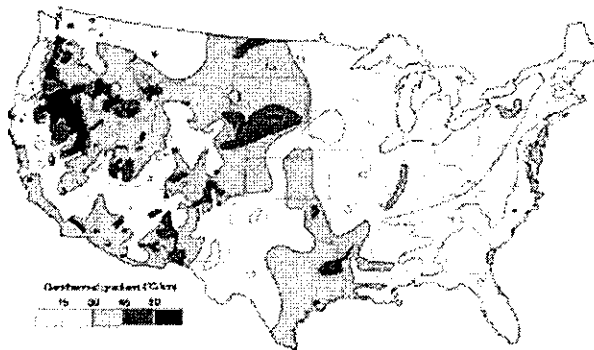


Figure 1. A geothermal gradient map of the United States. There are many high-gradient areas in the western part of the country.

AS CAN BE SEEN ABOVE HAWAII IS NOT ON THE MAP!

Conclusion:

Earlier in this session, Senator Russel Ruderman proposed legislation to prevent hydrofracking technology for use in geothermal development in Hawaii. This was part of a media effort on the part of Ruderman to attract attention to himself and a handful of his supporters in Puna (Puna Pono Alliance & Harry Kim) who have made over 2 million dollars on claimed "negative health impacts" that have never been proven in court. Ruderman's Bill was killed when it was revealed there was no real evidence to support it. This Resolution is being proposed as a face saving measure for Ruderman.

The State auditors office estimates that the cost for bringing 1 measure to hearing in the legislature is \$200,000.00. We already wasted \$200,000.00 on the first hearing for the Ruderman Bill, now we are wasting another \$200,000.00 on this hearing. This Resolution is ridiculous. There is no need for a "proactive approach" to safeguard the people of Hawaii from a technology that is not being used in Hawaii & will never be used in Hawaii. When the Civil Beat interviewed Ruderman on his failed Bill earlier in the session, he said it was a "pre-emptive strike against geothermal development." Now, he is taking a "proactive approach" to prevent geothermal development in Hawaii. It is plain to see that Ruderman is using the legislative process for his own agenda.

Lets stop wasting time with political games.

Please Kill this Resolution.

Regards,



Mililani B. Trask – Indigenous Consultants LLC

Carlton Saito

From: Cheryl Corbiell [cherylcorbiell@gmail.com]
Sent: Tuesday, March 26, 2013 9:15 AM
To: ENETestimony
Subject: Support SCR 123

Testimony on SCR123

Aloha Chairmen Gabbard, Solomon and Distinguished Committee Members,

I support this fracking ban, at least until particular project sites are identified that really are free of the potentially massive environmental risks typically associated with this technology. Common sense tells us that industrial techniques developed for the vast spaces of the mainland need to be carefully reviewed before they are unleashed on our small fragile islands. If we compromise our water supply, for example, we can't just run a pipe into the next valley or the next state. What works there may very well not work here.

In the rush to convert to renewable energy we need to make sure, in each case, that the cure isn't worse than the disease. One expects zeal from activists and lobbyists, but when it comes to legislation, zeal is usually only the mother of regret. I applaud the sponsors of this resolution for trying to slow down the rush and for demanding careful estimation of collateral damage and long term consequences. Mahalo.

Cheryl

--

Cheryl Corbiell
CP Group
Ka Hale Mala B&B
PO Box 1582, Kaunakakai HI 96748
808.553.9009

SCR123

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Rosemarie Patronette	Individual	Support	No

Comments:

SCR123

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Janeel Hew	Individual	Support	No

Comments: Greetings, Thank you for hearing SCR123/SR86. May it go on record that I support SCR123/SR86. In light of the potential hazards associated with hydraulic fracturing, it is imperative that more research/studies be performed in advance in order to set required safety regulation and mitigation guidelines. Too many times has technology taken a front seat to caution. Water resources are very precious here in Hawaii and the utmost safeguard of it is essential for public health. To risk contamination of any kind would be unjustifiable and inhumane. Hawaii is a volcanic creation and is susceptible to earthquakes. Technology which can cause earthquakes, should be used only with strict environmental impact evaluations completed and should show just cause for site specific projects in high impact areas. Until more research is completed and deemed safe, a full ban should be placed on all hydraulic fracturing in Hawaii. Please pass SCR123/SR86. Mahalo Janeel Hew

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Christi Demuth	Individual	Support	No

Comments: No Fracking!

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Stephen Luksic	Individual	Support	No

Comments: It is nice to see a bill designed to protect the community and the environment rather than corporate interests.

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Susan Vickery	Individual	Oppose	No

Comments: Ban Fracking Hawaii & across the Globe! Mahalo for respect of the land, water & air. Support Green, sustainable energy!

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Pono Kealoha	Individual	Oppose	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Marcia Hester	Individual	Comments Only	No

Comments: <http://thewmeacblog.org/2011/02/11/first-fracking-leak-in-michigan/.....please> stop all fracking everywhere....PLEASE!!!!**SR86**

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Brad Bordessa	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Bronson K. Silva	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
courtney Bruch	Individual	Support	No

Comments:

ENE/WTL 225 Mar 28, 2013 2:45 PM

Testimony RE: SCR 123 / SR 86

Position: Strong support

Name:

Vincent Callagher

Aloha

Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members.

Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members.

These tree points have been shown and along with many other reservations make me strongly support SCR 123 and SR 86

- 1) Hydraulic fracturing has been linked to seismic activity.
- 2) Hawaii is already prone to seismic activity.
- 3) There is a potential to pollute the ground water.

(sign)

--

Aloha, Vincent

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Valerie Sapourn	Individual	Oppose	No

Comments: NO FRACKING. PLEASE PROTECT our aina and our water supply.

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Murugan Elu	Individual	Oppose	No

Comments: It is outrageous that, the capital of natural beauties of the world is being preyed upon by corporate interest, to suck every living bit of blood out of this planet!

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Scott Wagner	Individual	Oppose	No

Comments: There are numerous other methods of obtaining clean energy. Hawaii has a unique opportunity in facilitating a much more ecologically sound method of clean energy. I OPPOSE

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Katherine Dassis	Individual	Support	No

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Matthew Parrisi	Individual	Oppose	No

Comments: Fracking in the Hawaiian Islands could not only damage scarce water supplies, but also destroy wildlife areas and be very unhealthy for local tourist as well as any other inhabitants that occupy these amazing environments. Please, No Fracking in the Hawaiian Islands !!!

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
joy cash	Individual	Support	No

Comments: Protect our aina.

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Thomas Trottier	Individual	Oppose	No

Comments: Aloha, I would like to put my very strong opposition to Fracking in Hawaii. What the hell are you people thinking??? Like it isn't bad enough that we have had HC&S and MLP dumping all kinds of pesticides and chemicals that leached into our drinking water and ocean reef system for the last 150 years ,, now you want add to the problem for the sake of some natural gas. I was at Ho'okipa Beach Park today and a couple of honu crawled up on the beach to sun themselves ,, it was so cool to see them but upon closer inspection, most of them had tumors all over their necks and heads ,, please do not allow Fracking on Maui. Mahalo Thomas Trottier Haiku, Maui

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Murray	Individual	Oppose	No

Comments: Oppose SR86

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Robert Freitas Jr.	Individual	Support	No

Comments: I support this bill!!!

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Donna Worden	Individual	Support	No

Comments: Hydraulic fracturing has ruined underground water sources. With each island having virtually one, single underground water source, it would be folly to chance wrecking that water "forever". OPPOSE hydraulic fracturing in every way possible, mahalo.

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Pono Kealoha	Individual	Support	No

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Valerie Barnes	Individual	Support	No

Comments: No to fracking in Hawaii. No.

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Leslie Wingate	Individual	Support	No

Comments: I want all drilling to stop in Hawaii. Fracking is especially dangerous. Stop hurting my mother! The earth!

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ann Kobsa	Individual	Support	No

Comments: I am opposed to hydraulic fracturing and urge you to support this resolution.

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Avi Okin	Individual	Support	No

Comments: No fracking in Hawaii. This is a dangerous process with highly unknown future consequences for Hawaii.

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
steve scott	Individual	Oppose	No

Comments: My family are very against any form of fracking technology.. Especially in our Unique and Beautiful state

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Dea Rackley	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
sarah smith	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
bill collins	Individual	Support	No

Comments: a vote for this measure is a message that Hawaii is no longer for sale. Protect these lands for future generations, now.

Geothermal Fracking, Hydro Shearing, and Hydraulic Fracturing

Enhanced Geothermal Systems (EGS)

- ✧ A conventional geothermal resource requires hot rock, permeability to allow flow, and water. Conventional geothermal resource sites are difficult to find....there is one proven site in all of the State of Hawai'i
- ✧ Enhanced Geothermal Systems make geothermal possible at several orders of magnitude more sites. Dozens may be possible in the State of Hawai'i
- ✧ According to 2007 MIT study for the National Research Council, enhanced geothermal systems (EGS) plants could produce 15 % of the US electrical power by 2050. To take advantage of this the federal government will invest billions in research and risk mitigation financing for geothermal companies.

EGS Technology

- ✧ Enhanced geothermal uses geothermal fracking (sometimes called hydraulic shearing or hydraulic fracturing) to break up the hot rock in order to increase its permeability.. After cold water cracks the hot rock, high pressure water propagates the cracks to create a reservoir in the hot rock. The needed size for the reservoir has been set at about 1 kilometer cubed.
- ✧ Enhanced geothermal provides water to the dry, hot rock by bringing the water from the ocean or from nearby water wells.

Is Geothermal Fracking Really Fracking? A Legal Point of View

What follows is a quote from Sandra Tvarian Stevens, a Washington D.C. lawyer:

In sum, due to the similarity of the basic fracking process utilized by both natural gas and geothermal companies, the likelihood for comparable claims and lawsuits being asserted against these industries is high, most notably with respect to claims arising out of earthquake damage and well blowouts. While both natural gas and geothermal companies alike face the potential for pollution claims, the kinds of allegations asserted may differ, at least in so far as geothermal companies reportedly rely more on saltwater injection and less on chemical additives in their fracking operations than natural gas companies. (Sandra Tvarian Stevens, August 31, 2011 | Coverage Insights)

A Case Study to Identify Issues with EGS

- ✧ Currently, the premiere EGS project is one at the Newberry Volcano National Monument (NVNM) near Bend, Oregon
- ✧ At this site EGS methods are being used to reinvigorate an existing geothermal resource so that it can make greater power.
- ✧ AltaRock (an EGS company that is exploring opportunities in the State of Hawai'i) will use geothermal fracking to increase the permeability of the resource
- ✧ What follows concerning challenges to geothermal fracking is based on the NVNM project's environmental assessment

What Are the Differences Between Oil/gas and Geothermal Fracking?

- ✧ Most advocates claim geothermal uses fewer and less toxic chemicals, but:
 - ✧ Oil and gas companies use chemicals that are proprietary
 - ✧ AltaRock uses chemicals that are proprietary
- ✧ Some have said that geothermal companies will use salt water rather than fresh water, but:
 - ✧ AltaRock is using normal well water
- ✧ In geothermal fracking, cracking of rock is done by cold water against hot rock, but
 - ✧ AltaRock uses water at an over pressure of ~ 2000 psi to propagate the cracks throughout the rock. The exact pressure the water is pumped into the ground is determined by in-well testing that finds what pressure is needed.

AltaRock's Effort in Oregon--Water Use

- * AltaRock anticipates the fracking effort will use 24,000,000 million gallons of high pressure water over three weeks (24,000,000 gallons) (240 trips of the largest tanker trucks)(a home uses 400 gallons a day)(4 to 10 times the water used in fracking gas/oil well)
- * AltaRock anticipates using 124,000,000 gallons of water to support the experimental project over two years (124,000,000 gallons) (1,240 tankers) (15 times the water used in the lifetime of a fracked oil/gas well)

AltaRock's Effort in Oregon--Water Contamination

- * Direction of cracks
 - * A network of seismometers is supposed to determine which way and how far the hydraulically induced cracks propagate.
 - * If the cracks propagate toward the fresh water layer risking contamination, it is assumed operations can be stopped with adequate buffer for safety.
- * Blowouts
 - * Wells to insert the fracking water are similar to injection wells at Puna Geothermal Venture (PGV), but overpressure will be higher than PGV's by 1500 psi.
 - * PGV had a piping failure on an injection well in November 2012. The well pressure at the time of the PGV failure was considerably less than the pressure that will be used for fracking by AltaRock.

AltaRock's Efforts--History of Earthquakes

- * An effort in Basel, Switzerland, was terminated when earthquakes caused \$9M damage. A NY Times investigative report questioned whether AltaRock was forthcoming with data.
- * Germany stopped development on several geothermal plants over concerns with earthquakes
- * A fracking effort at Geysers in California was terminated shortly after problems with Basel became public.
- * Near Middleton, California, 19 damage claims from small earthquakes have been settled by a committee mediation process.

AltaRock's Effort in Oregon--Earthquakes

- ✧ In Oregon, AltaRock will monitor cracks in a nearby dam to ensure they do not worsen as a result of induced earthquakes.
- ✧ In less probable but possible earthquakes start to occur around the NVNM site, AltaRock plans to depressurize the geothermal reservoir by dumping water over a period of days. First the water would be dumped to empty storage tanks specified for that purpose and, if that were insufficient, then there is a contingency to dump the water to the ground

AltaRock's Effort in Oregon--Environment and Lifestyle

- ✧ Other issues that need to be considered include:
 - ✧ Truck and other traffic on narrow roads
 - ✧ Noise to neighbors
 - ✧ Environmental issues with clearing of land for plant development and for water transport
 - ✧ Local water shortages or degradation of water quality from "over-use"
 - ✧ Unabated or abated release of steam during flow testing (H₂S release)
 - ✧ Potential 930 foot steam and chemical plume during flow testing
 - ✧ Access to public trails and paths
 - ✧ Road building

AltaRock's Effort in Oregon--Community Involvement

- ✧ In Oregon the community involvement included:
 - ✧ Two meetings and two locations
 - ✧ A tour of the site
 - ✧ Newspaper articles

Hawai'i Regulation of Enhanced Geothermal--Fracking

- ✧ Senate Bill 375 to regulate hydraulic fracturing during 2013 legislature did not make it from committee. Testimony against the bill included Millilani Trask speaking for a geothermal company.

Hawai'i Legislative Issues for Consideration

- * Before allowing EGS projects the State might consider:
 - * How to protect the environment and water resources while providing access to a substantial supply of water to form an artificial reservoir. The need for a constant supply of additional water to make up for expected constant lost of water during geothermal production must also be considered.
 - * How to estimate risks of induced seismicity and to control and regulate those risks.
 - * How to place a major industrial activity inside a framework that gives the community voice and protects social, cultural, and economic interests

Lorn Douglas

RR2 4544
12-7045 Kekainehe St.
Pahoa, Hawaii 96778
(808) 965-8421
lornd@yahoo.com

COMMITTEE ON ENERGY AND ENVIRONMENT

Re: In Support of SCR123/SR86


Aloha Chair Gabbard and Committee Members,

I am a retired businessman and 29 year resident of the Big Island. I live in Lower Puna, a rural district the is a jewel in many ways. There is not a day when I don't stop at some point to thank God for the priviledge of living in such a beautiful place. I choose to live a sustainable lifestyle, growing lots of food, generating enough solar power to fuel my two houses and two electric cars. I also heat my water with solar power.

Hawaii depends upon its environment to attract tourists who can really appreciate what a jewel we have. Many tourists flock to see the volcano and its our responsibility as stewards of the aina to not bespoil and to not to take unreasonable risks. As a long term resident who has witnessed many errors and accidents I do not trust that fracking will be implemented safely nor sustainably.

As an engineer I appreciate the potential of safe geothermal energy as a renewable resource. However this is NOT what has been implemented and a smoke screen has been attempted to make it appear safe and economical. As recent as last month there was a leak and as the air was fouled with the smell of rotten eggs the safety officer was walking around with an apparent faulty meter trying to convince people that there was no problem. Its obvious to our community that this industry cannot be self regulating. Also if this is abundant and 'free' energy why are our power bills even higher than the other islands?

Mahalo for your consideration to support this important legislation,



Lorn Douglas

Good day,

I'm writing testimony that is in support of SR 86, the bill slated to oppose hydraulic fracking in the state of Hawaii.

Hydraulic fracking is a technology that is too aggressive for an area such as volcanic, seismic Hawaii. There are many potentials for stress to occur on the surface and potentially aggravate the seismic activity that already happens daily. I'm also afraid for the potential for poisoned drinking water, polluted air, mysterious animal deaths, industrial explosions, all occurrences that have already happened in fracking sites around the mainland USA.

Taking this route as an alternative to create energy seems like it would open us up to unnecessary exposure to potentially fatal abuses of human and animal life and environment. Especially when we can use the research money from federal subsidies and private investment to continue to develop safer and more efficient and less harmful technologies such as solar energy.

Thanks for your time and please support SR 86.

Best,

Tamara C. Dorman

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
caroline avery	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Mitsuko Hayakawa	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Cora Piliwale	Individual	Support	No

Comments: Aloha, Was born and raised here on Oahu. I DO NOT WANT FRACKING!! I support SR86 Mahalo, Cora Piliwale Waianae, HI.

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Larson Noa	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
lieu nguyen	Individual	Support	No

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
L Tran	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
michael hawthorne	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
missy kouma	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Mondiau Simmons	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Nga Nitaman	Individual	Support	No

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
liensa nguyen	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Nate Wolford	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
bich phuong	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
briggs kauua	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Buddy Smith	Individual	Support	No

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Beatrice Oconnor	Individual	Support	No

Comments

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
chauncy domin	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Cotu Connors	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Finia Kaanoa	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Faye Ford	Individual	Support	No

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Kirbin	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
gary popkin	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
tj simms	Individual	Support	No

Comments:

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
M. T. Sherrow	Individual	Oppose	No

Comments: I oppose fracking in Hawaii as we are a volcanic nation with earthquakes. It is a fragile nation and to have human interference with the aina in this way is to call in disaster! STOP...KAPU!

SR86

Submitted on: 3/25/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Joseph Kohn MD	Individual	Support	No

Comments: There is no rational reason to pollute our own environment or destroy other species. www.WeAreOne.cc

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Support	No

Comments:

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Scott Stoddard	Individual	Support	No

Comments:

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Rozalynn Marae Erickson	Individual	Oppose	No

Comments: I live in hawaii on and off and travel frequently. I ABSOLUTELY would not want to see the disruption of hydraulic fracking to be started on these majestic islands. There is too much danger involved in this process! I absolutely oppose hydraulic fracking!!!!

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Suzanne Wakelin, Ph.D.	Individual	Support	No

Comments: I am in STRONG SUPPORT of SR86. Hawaii Renewable Energy Development Venture has published a Technology Assessment with conclusion that because "...It appears that Iceland is leading the way and it might be a good investment for Hawaii to follow their lead" however neglects to mention all of the very real and significant dangers seen with many other hydraulic fracturing projects around the world and how these issues would affect Hawaii. 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. 3) There is a potential to pollute the ground water We must not allow the potential for tax credits and stimulus monies coming in to Hawaii for experimentation to override the importance of protecting Hawaii. We need proper regulation that addresses these issues. Mahalo <http://www.hawaiiirenewable.com/wp-content/uploads/2009/12/8.-Geothermal.pdf>

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Lauren Ampolos	Individual	Support	No

Comments:

ENE/WTL 225 Mar 28, 2013 2:45 PM
 Testimony RE: SCR 123 / SR 86

Position: Strong support

To: The Senate Committee on Energy and Environment Use ENE

I strongly support SCR 123 and SR 86!
 Hydraulic fracturing has been linked to seismic activity, and we all know Hawaii has enough of that already! My other huge concern is the potential to pollute groundwater. Lets keep Hawaii safe and clean, and find alternate energy sorources... like SOLAR!

Catherine Ridder, M.Div, MFT Owner Hokulea Retreat 13-382 Pohoiki Rd. Pahoia HI 96778

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Paul Kuykendall	Individual	Support	No

Comments: Aloha, Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. I am a citizen of the Big Island and I strongly support SCR 123 / SR 86 for the following reasons. Hydraulic fracturing has been linked to seismic activity. Hawaii, due to its geological composition, is already prone to hydraulic fracturing. Hydraulic fracturing has the strong potential to pollute groundwater and the air. Please do not allow these risks to our Aina and the people of Hawaii. Mahalo for your consideration

Testimony RE: SCR 123 / SR 86

Position: Strong support

Name: Nicki Conti and Sevyn Galambos

We are writing in support of SRC 123/ SR 86

Hydraulic fracturing is dangerous , it is not a green technology ,and should not be allowed. It has been linked to seismic activity , underground water pollution and a host of other problems. To even consider using this technology in Hawaii is not only a very bad idea , It is a risk to the people of Hawaii that you the representatives of the people of Hawaii should not allow. We strongly support this bill and we hope ,you, are representatives support us and protect us by passing this bill.

Thank you for your time

Nicki Conti and Sevyn Galambos Pohoiki Rd Pahoia Hi

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
claudia rice	Individual	Oppose	No

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Elaine D.	Individual	Support	No

Comments: This is intelligent and sensible legislation. Please pass SR86

ENE/WTL 225 Mar 28, 2013 2:45 PM

Testimony RE: SCR 123 / SR 86

Position: Strong support

Name: Frederic Kotowitz

Hydraulic Fracturing has been linked to seismic activity and on this relatively new geological formation the chances of creating further seismic activity is dramatically increased !!!

Also as we have all heard about the horror stories surrounding the hundreds of thousands of fracked wells on the mainland in search of natural gas and their huge potential for water pollution. I am sure the chances of water pollution happening here are devastatingly increased exponentially with the very porous lava rock beneath us!!!

signed: Frederic Kotowitz (Pahoa)

ENE/WTL 225 Mar 28, 2013 2:45 PM

Testimony RE: SCR 123 / SR 86

Position: Strong support

Name: Sarah Lynn Joy

This MUST be supported: SCR123/SR86 *Opposing* the use of hydraulic fracturing in Hawaii.

Hydraulic fracturing is not necessary. Nor a wise idea. Please stop it.

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
janice palma-glenie	Individual	Support	No

Comments: i strongly support this measure which would insure that hydraulic fracturing does not occur in our island state. please support SR86.

ENE/WTL 225 Mar 28, 2013 2:45 PM

Testimony RE: SCR 123 / SR 86

Position: Strong support

Name: Steven Jacquier, individual.

The proposed drilling has serious potential to injure Hawaii's environment and tourist industry. It has already injured my property values and the property values of my neighbors. If drilling occurs then when a large problem arises Puna lacks the infrastructure to respond. Who foots the bill when health and property are harmed? Who pays for cleaning up the toxic mess and debt remaining long after the shell company goes bankrupt? Scientists from the USGS recommend against this, as do medical researchers. Hydraulic fracturing has been linked to seismic activity, Hawaii is already prone to seismic activity, and there is a potential to pollute the ground water as well as risk of toxic gas venting. There are two babies next door and several children under four years old along our lane who will be exposed when venting occurs. Their parents cannot afford to move elsewhere and are very worried. My guess is for every one person who write to you there are at least a dozen (frankly) less literate & economically secure citizens, unsophisticated in how testimony may be sent and unequipped to do so, who are very upset about this. These are people you are representing. I know some of them are registered to vote and do vote because I registered them and drive them to the polls. Please oppose drilling; better alternatives exist in terms of energy technology & security, being sustainable, & far less hazardous.

Sincerely,
Steven Jacquier

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Individual	Support	No

Comments: I strongly support SENATE RESOLUTION 86 OPPOSING THE USE OF HYDRAULIC FRACTURING IN HAWAII and urge you to pass this resolution. Hydraulic Fracturing – known as “Fracking” threatens the air we breathe, the water we drink, and the communities we live in. In this bill it outlines “potential” problems to expect with fracking. Past experience from other communities subjected to fracking is that it not a matter of “if” it’s a matter of “when”. There are more than 1,000 documented cases of water contamination near fracking drilling sites around the country. Communities currently near drilling sites with fracking operations have ended up with a multitude of adverse impacts to their environment and health, including depletion of local water supplies, contamination issues (including natural gas migrating into drinking water sources which has caused houses and wells to explode), adverse impacts from discharge of hazardous waste water that contains radioactive substances and other toxic chemicals, as well as air and noise pollution issues. Not surprising, people who live in areas where fracking occurs also experience reduced property values. How Hawaii could even be considering use of this technology is beyond belief. Please so the only sane thing and support the passage of this resolution! Mahalo, Sherry Pollack Kahal

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Luana Jones	Individual	Support	No

Comments: Aloha Kakou - I am a geothermal neighbor and my 'ohana and neighbors have endured over 20 years of occasionally planned, but many un-announced, noxious, violating gases that seep into our homes and bodies. This is because a geothermal power plant is in our neighborhood; at least we know the source. One power plant is enough in Hawai'i! It is dangerously bad for people and the 'aina, not only releasing deadly gases, but re-injecting millions and millions of gallons of pilau fluid into the 'aina, making its way down to the sea. This is not right - 'a'ole pono in our beloved Hawai'i. Therefore, I support this precautionary resolution. As precious and finite islands surrounded by water, our leaders need to be looking into ocean generated energy, and not yielding to corporate flexing, whose only purpose is to monopolize our resources to

amass their wealth! They were not elected to serve Hawai'i and they don't care! Please kokua our Hawai'i! 'Ua mau ke 'ea o ka 'aina i ka pono! Mahalo nui kakou!

ENE/WTL 225 Mar 28, 2013 2:45 PM

Testimony RE: SCR 123 / SR 86

Position: Strong support

Name: Jane Howard

1) Hydraulic fracturing has been linked to seismic activity and Hawaii is already prone to seismic activity.

2. Potential for acid rain, affecting water catchment systems we depend on.

3) There is a potential to pollute the ground water, as seen in various mid western states.

MAHALO for your concern for the environment.

Jane O. Howard

Agent for Adventure

State of Hawaii Teacher

AdventureConnect Regional Advocate, HAWAII

Islandjane EcoTours

Mobile:(206) 769-6291

islandjane.howard@gmail.com www.adventuretravel.biz

www.islandjaneecotours.com

<http://www.facebook.com/IslandjaneEcoTours>

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
MS Matson	Individual	Support	No

Comments: Strong support.

SENATE COMMITTEE on ENERGY and ENVIRONMENT
March 28 Public Hearing
Conference Room 225
2:45 PM

SENATE CONCURRENT RESOLUTION 123 & SENATE RESOLUTION 86
OPPOSING THE USE OF HYDRAULIC FRACTURING IN HAWAII

Testimony in STRONG SUPPORT by M.S.Matson

Aloha Committee Chairs, Vice Chairs and Members:

Most recently it has become known that certain untoward influences in the state are promoting a so-called "enhanced geothermal process" - otherwise known as hydraulic fracturing ("fracking"). This controversial and dangerous process has been outlawed in France, Vermont and New York - and has been met with strong legal challenges now in California.

See:

<http://www.acwa.com/news/groundwater/new-lawsuit-filed-over-fracking-california>

http://www.huffingtonpost.com/2012/10/16/california-fracking-lawsuit-2012_n_1971415.html

<http://www.bloomberg.com/news/2013-01-24/california-sued-for-allegedly-failing-to-regulate-fracking-1-.html>

<http://www.californiaprogressreport.com/site/lawsuit-filed-against-fracking-oil-lobbyist-says-its-safe>

It would behoove the committees to **most seriously consider** the ultimately destructive effects of geothermal exploration and exploitation. The associated and potentially disastrous effects of "fracking" include, but are not limited to:

- Drinking water poisoned by toxic chemicals;
- Enormous consumption of finite domestic and agricultural water resources;
- Polluted air and wildlife deaths;
- Industrial disasters and explosions; and
- Earthquakes.

Geothermal zones have been mapped on four Hawaiian islands, including two vast areas on O'ahu along the populated Windward coast expance to the Ko'olau Mountains, and the Waianae region. See: attached map.

In view of this history, SCR 123 and SR 86 offer some consolation that the 2013 State Legislature has caught wind of the alarms sounding from Hawai'i citizens statewide, including Puna residents having direct experience with the failures and recurring "accidents" of present geothermal pursuits.

It is time to recognize the short-sighted shortcomings of aggressive and careless exploitation, and to proactively protect the safety, health and welfare of the People of Hawai'i in the greater public interest. Opposing "fracking" is a good beginning.

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Lyn Howe	Individual	Support	No

Comments: I strongly support this bill, Hydraulic fracturing has been linked to seismic activity. and where Hawaii is already prone to seismic activity. One can not know what might trigger greater activity not to mention the problems with ground water pollution that have been seen in areas that use fracking. we cannot endanger our ocean, reefs and fisheries or a clean water supply that the people of Hawaii depend on to farm, drink and exist.

Testimony on SCR123

Dr. Laurence Tool

I support this fracking ban, at least until particular project sites are identified that really are free of the potentially massive environmental risks typically associated with this technology. Common sense tells us that industrial techniques developed for the vast spaces of the mainland need to be carefully reviewed before they are unleashed on our small fragile islands. If we compromise our water supply, for example, we can't just run a pipe into the next valley or the next state. What works there may very well not work here.

In the rush to convert to renewable energy we need to make sure, in each case, that the cure isn't worse than the disease. One expects zeal from activists and lobbyists, but when it comes to legislation, zeal is usually only the mother of regret. I applaud the sponsors of this resolution for trying to slow down the rush and for demanding careful estimation of collateral damage and long term consequences. Mahalo.

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Larry Obermann	Individual	Oppose	No

Comments: "Fracking" is a process used in oil and gas extraction. It does not apply to enhanced geothermal. The problems cited in this resolution have been addressed and can easily be overcome. Why would you condemn a new technology that is in its infancy ?

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Doran Vaughan	Individual	Support	No

Comments: I strongly support SCR 123 and SR 86. 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. 3) There is a potential to pollute the ground water

Testimony on SCR123

I support this fracking ban, at least until particular project sites are identified that really are free of the potentially massive environmental risks typically associated with this technology. Common sense tells us that industrial techniques developed for the vast spaces of the mainland need to be carefully reviewed before they are unleashed on our small fragile islands. If we compromise our water supply, for example, we can't just run a pipe into the next valley or the next state. What works there may very well not work here.

In the rush to convert to renewable energy we need to make sure, in each case, that the cure isn't worse than the disease. One expects zeal from activists and lobbyists, but when it comes to legislation, zeal is usually only the mother of regret. I applaud the sponsors of this resolution for trying to slow down the rush and for demanding careful estimation of collateral damage and long term consequences. Mahalo.

Cheryl Corbiell
CP Group
Ka Hale Mala B&B
PO Box 1582, Kaunakakai HI 96748
808.553.9009

Sophia Bicoy
Support 123

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Pamela Williams	Individual	Support	No

Comments:

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Dave Kisor	Individual	Support	No

Comments: So far no good has come from fracking and if anybody believes it is practical to frack an island, they are off their meds. I'm on catchment and until the time I can install a UV water system, drink purified county water. If anything, that will force me to design and get it installed in a bigger hurry. What fracking does to the ground water is unconscionable. There are too many recorded instances of tap water on the mainland catching fire from the proprietary chemicals they use. We don't know what's in them, so they could cause cancer for all we know. Aside from that, the geology is already fractured in Puna. Fracking is a worse idea than the state bringing in albezia trees and mongoose. If they get to frack (not calling it fracking, but enhanced geothermal, much like torture wasn't torture when it was an enhanced interrogation technique) no island is safe from it. Whoever supports this insanity, I sincerely hope they get fracked.

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Jennifer Holmgren	Individual	Support	No

Comments: On behalf of all citizens of the United States who oppose the ruination of our beautiful environment and our health, I support the legislation banning fracking in Hawaii. Hawaii has so many beautiful, natural resources - there is no need for fracking there.

I oppose any type of fracking taking place in Hawaii.

It is associated with earthquakes, sinkholes, environmental pollution, and has no place in our state. Please do not allow fracking or anything similar.

Sincerely,
Vicki Vierra

Vicki Vierra Graphic Design
HC 1 Box 5077
Keaau Hawaii 96749
808 966 6333

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Lorena Townsend	Individual	Support	No

Comments: I have done much research as a concerned citizen on the process of hydraulic fracturing. Just in the last 3 months in Colorado we have had over a 100 spills resulting in 13 cases of groundwater contamination and 11 cases of surface water contamination. I found out that much of the dirt which is excavated after the spill is simply dumped in the local landfill. This dirt contains extremely high levels of benzene which has been proven to cause cancer. Please support this measure and protect the beautiful state of Hawaii and its citizens

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Marie Alohalani Brown	Individual	Support	No

Comments: We will we go when we have completely destroyed our environment? I oppose fracking here in Hawaii or anywhere else.

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Richard Denholm	Individual	Support	No

Comments: ENE/WTL 225 Mar 28, 2013 2:45 PM Testimony RE: SCR 123 / SR 86
Position: Strong support Aloha Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. please support this important bill! Richard D.

Carlton Saito

From: roblyn@ak.net on behalf of Roblyn Wiebe [roblyn@ak.net]
Sent: Wednesday, March 27, 2013 11:42 AM
To: ENETestimony
Subject: Testimony re SCR 123 / SR 86

ENE/WTL 225.....Meeting of March 28, 2013 at 2:45pm

Testimony Re: SCR 123 /SR 86

From: Roblyn L Wiebe
13-640 Pohoiki Rd
Pahoa, HI 96778

Position: Strong Support

Aloha:

Senator Mike Gabbard, ENE, Senator Russell Ruderman, Vice Chair, and committee members.
Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members.

I am new to Hawaii, however I have lived here for four years now at our new home on Pohoiki Road. I am very concerned that the right decisions are made to protect all of the islands. The decisions that are made now will affect generations down the road. I know that the Hawaii Clean Energy Initiative is addressing the state's energy dependence on fossil fuel, with the goal of producing 70% clean energy by 2030. I don't see geothermal as being the most safe and clean to the environment and to the neighborhoods that geothermal plants can be in the middle of; as much as we all want to think that they are perfectly safe for us and the environment. At the very least, we are utilizing toxic chemicals in the geothermal electricity production process, many many gallons of which are re-injected into the earth below us. Can we keep these chemicals from infecting our water table...or even causing issues in our ocean waters around us? When hydraulic fracturing is added to the equation, how are we going to know that we are not causing serious issues to the water table and/or promoting additional seismic activity on an island where seismic activity, linked with volcanic activity are already a dominant equation.

Let's focus on utilizing solar power in any way we can. It is always clean and safe. I know there are issues of consistency of power, however, we still need to promote it and utilize it in any way we can.

In summary, I am in strong support of opposing the use of hydraulic fracturing in Hawaii.

Sincerely,

Roblyn L Wiebe, EA

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Leila Kealoha	Individual	Support	No

I strongly support SCR123 and SR86 and request that you ban fracking in Hawaii. There is so much evidence that shows how terrible fracking is for the environment, water pollution, and health of humans and animals, and more known and unknown risks. Your primary role as government is to provide for our HEALTH AND SAFETY. We desperately need you to listen to your constituents and fight the hard fight representing us against the MISINFORMED people in power and the corporations that are solely driven by profit. This is a huge issue for our community. We are not collateral damage. I live in Pahoia – near an active volcano on very porous and seismically active land. We have already witnessed the on-going problems with Puna Geothermal Venture. I am scared, angry and outraged that there is the possibility of more geothermal development and “enhanced geothermal” aka fracking in Puna - alongside residences, farms and food crops. I have two small children. We own two lots for each of them. We are almost done building our home where we envision ourselves growing old and leaving a legacy for our future generations. We give back to the community. My husband is a first responder and I worked in social work and now education. We pay taxes and vote. We should not be subjected to geothermal drilling, fracking and hydrogen production near our homes. This is outrageous! Please come to Puna and get educated on the reality of how this type of industry is negatively affecting Hawaii. Talk with us and see for yourself. The people making the decisions don’t have the correct information – they are being misinformed. Please listen to the Puna Pono Alliance. They truly represent our community. We are all ready to fight for what is right and to protect the land and future. Please do not let our hopes and dreams be squashed by the huge push of money from the federal government for green energy initiatives that are too fast without enough information, rules and regulations. You need results from real health studies, and scientific data from third parties regarding health and environmental concerns. Don’t let the industry self-regulate. Make sure these corporations are liable for all of the accidents and damage they have and will cause. Please read this recent article as it so closely relates to what may happen in Hawaii:

<http://www.thenation.com/article/171504/fracking-our-food-supply#> Please watch the documentary "Gasland" if you haven't already: <http://www.gaslandthemovie.com/> Thank you for reading my comments. I look forward to your vote and truly hope you ban fracking in Hawaii for the health and safety of our state and future generations.

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Keri Dickie-Clark	Individual	Support	No

Comments: ENE/WTL 225 Mar 28, 2013 2:45 PM Testimony RE: SCR 123 / SR 86
Position: Strong support please protect the aina! Keri Dickie-Clark

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ray Dittman	Individual	Support	No

Comments: Aloha Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. support this ban on fracking because 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. This could destabilize the substrate 3) There is a potential to pollute the ground water. thank you Ray Dittman

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Maya Dolena	Individual	Support	No

Comments: ENE/WTL 225 Mar 28, 2013 2:45 PM Testimony RE: SCR 123 / SR 86
Position: Strong support 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. This could destabilize the substrate 3) There is a potential to pollute the ground water. thanks Maya Dolena

ENEWTL 225 March 28,2013 2:45PM

Testimony RE:SCR/SR86

I strongly support these measures.

Dr. Avery Freed
Opihikao
Big Island

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Randy Friesen	Individual	Support	No

Comments: Please support this bill to keep hawaii clean and safe from fracking. thank you Randy Friesen

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Cathrine A. Grace	Individual	Support	No

Comments: ENE/WTL 225 Mar 28, 2013 2:45 PM Testimony RE: SCR 123 / SR 86 Position: Strong support This make so much sense. Protect our land! thanks Cathrine A. Grace

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Dona Willoughby	Individual	Support	No

Comments: Aloha Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. It is so important to not allow this activity in Hawaii! thank you, Dona Willoughby

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Aric Harris	Individual	Support	No

Comments: I would like to submit my testimony to oppose fracturing in Hawaii

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Aniko willoughby	Individual	Support	No

Comments: 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. This could destabilize the substrate 3) There is a potential to pollute the ground water. please support this bill. Aniko Willoughby

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Jack Adam Weber	Individual	Support	No

Comments: We need to change the rules so that we can actually turn around the destructive path humanity is on. We need to stand up and be proud to serve as an example to the world for action in the name of sustainability and sane progress. We must be able to benefit the local and global community by living and researching more sustainable, traditional ways of conducting life. Please support this ban on dangerous geothermal drilling. thank you, Jack Adam Weber

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Natividad M. Webb	Individual	Support	No

Comments: Aloha Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. please support this bill. 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. This could destabilize the substrate 3) There is a potential to pollute the ground water. thanks Natividad M. Webb

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
David L. Webb	Individual	Support	No

Comments: Testimony RE: SCR 123 / SR 86 Position: Strong support David L. Webb

Testimony RE: SCR 123 / SR 86
Position: Strong support

- 1) Hydraulic fracturing has been linked to seismic activity.
- 2) Hawaii is already prone to seismic activity.
- 3) There is a potential to pollute the ground water.

Mahalo,
Theodore Banta
131308 Kahukai St
Pahoa, HI 96778

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Valerie Simpson	Individual	Support	No

Comments: please support this bill! Hydraulic fracturing has been linked to seismic activity. Hawaii is already prone to seismic activity. This could destabilize the substrate There is a potential to pollute the ground water.

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
chris Walker	Individual	Support	No

Comments: Position: Strong support for this important bill. thank you Chris Walker

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Bernadette sabath	Individual	Support	No

Comments: I strongly support SCR 123 and SR 86. thank you Bernadette sabath

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Eliot Rosen	Individual	Support	No

Comments: It is very important to support this bill that protects our environment. thank you,

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Bernd Riechelmann	Individual	Support	No

Comments: Testimony RE: SCR 123 / SR 86 Position: Strong support for this protection for our land. Bernd Riechelmann

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Deborah Painchaud	Individual	Support	No

Comments: Aloha Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. please support this bill. Hawaii is already prone to seismic activity. This could destabilize the substrate. thank you, Deborah Painchaud

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Molly Miller	Individual	Support	No

Comments: Testimony RE: SCR 123 / SR 86 Position: Strong support Aloha Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. Talking points for your comments: 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. This could destabilize the substrate 3) There is a potential to pollute the ground water. thanks Molly miller

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Margaret Martin	Individual	Support	No

Comments: Aloha Senator Mike Gabbard, Chair, ENE, Senator Russell E. Ruderman, Vice Chair, and committee members. Senator Malama Solomon, Chair, WTL, Senator Maile S.L. Shimabukuro, Vice Chair, and committee members. I strongly support this ban of geothermal fracturing.

SCR123

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ariya Lorenz	Individual	Support	No

Comments: Testimony RE: SCR 123 / SR 86 Position: Strong support Ariya Lorenz

I have seen the effects of hydraulic fracturing on the east coast of the US, where I am from. This practice can completely destroy the land and water supply. In areas where fracking is going on, people can light their water on fire. These companies say that there is no damage to the land with fracking, but it is a lie – fracking allows gas to leak into the water supply and the soil. There are other more harmonious ways which we can work toward to supply the fuel that we need to keep running as a society- it makes absolutely no sense to bite the hand that feeds- to destroy the very land which we walk upon. We need to stop digging into our mother land and learn to live in harmony with her. Please put this ban into effect so that this practice will never take root on our sacred 'aina. Mahalo, Kate Glover

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Rayan Wilson	Individual	Oppose	No

Comments: Are you folks trying to destroy this aina? It's the only one we have!!!
Monsanto and now this. Au'we!

ENE/WTL 225 Mar 28, 2013 2:45 PM
Testimony RE: SCR 123 / SR 86
Position: Strong support

Fresh clean water is Hawaii Island's greatest resources and fracking could pollute our groundwater. It is an irresponsible risk to take that could ruin our aquifers forever. We must find responsible ways to produce energy that have less environmental impact. I would rather go without electricity than risk spoiling our sacred aquifers. Me ke aloha 'aina

Joseph Kualii Camara
NARS Technician
19 E Kawili St.
Hilo HI 96720
(808) 443 1229

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Toni Auld Yardley	Individual	Support	No

Comments: MALAMA TUTU PELE. ALOHA AINA - EA! BAN FRACKING IN HAWAI'I NEI

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Carolyn Ornellas	Individual	Support	No

Comments: Accidents can and do happen and must be prevented to protect our precious islands and home.

SR86

Submitted on: 3/26/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Stanley Ornellas	Individual	Support	No

Comments: For the mo'opuna

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Amy Spaulding	Individual	Comments Only	No

Comments: Dear Legislators, Please protect Hawaii's pristine resources. I visited the Hawaiian Islands in 1989 as an 18 year old. It was one of the most profoundly beautiful and inspiring places I have ever been. The air smelled sweet when I got off of the plane and the sky, clouds, and fauna were restorative. There is a great spirit in Hawaii. Please protect it for the rest of the world. Many thanks, Amy C. Spaulding, Durham, North Carolina

SR86

I believe this is the link to testify against hydraulic fracturing in Hawaii. Truly, I can't imagine why such a process is even plausible and possible in the world, let alone in the USA. Injecting a mixture of highly volatile chemicals and substances deep into the Earth where they can then immediately be absorbed by the underground water sources and eventually leech back out into the environment, poisoning plants, animals, and humans indiscriminately is not my idea of something that should be done on any level. Of course I am against something of the kind, as should be every sensible human being. Therefore, I am writing to testify against hydraulic fracturing in Hawaii (and against hydraulic fracturing in general used in any way). Please don't allow anymore of this senseless destruction to continue.

Lara Hughes
Hawaii Resident

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Tracy Moss	Individual	Comments Only	No

Comments: We, as a Nation, need to put our clean air, water & soils before profit. Fracking threatens all of these and weakens the structure of the land beneath our feet, homes, businesses, schools, etc, etc.

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Louise De Simone	Individual	Oppose	No

Comments: I have only lived in Pennsylvania for 10 years when I got my 1st diagnosis of breast cancer. I have no family history of it and it was not hormonal. I did not smoke or drink. The only water I bathed in and cooked in was from my private water well. I got my 1st tumor and removed it from urinary tract and then the other started to discover. I blame these tumors on leaking old well sites that get into private water source. Old wells are not even regulated, and there is no real DEP in PA we call it Don't Expect Protection. Corruption is rampant since this Corrupt Gov. Corporate Corbett" sold everyone out. I am now broke and don't even have the money for a bankrupsy attorney I can tell you to look at Dimock PA and ask Craig and Julie Saunter ask them if it was worth losing the health and worrying about cancer. I see you are depending on people coming for pleasure and vacation, how many will come to see total devastation such as been seen in the Gulf? I say unto you see the LOSS of the Tarsands in Canada. We don't need it! Look to Gasland The Movie .com Look to Dr. Theo Colborn, Proff. Ingraffa these Medical Dr. and REAL SCIENTISTS can tell you it will destroy your precious island! Please DON"T FRACK!!!

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
sarah smith	Individual	Support	No

Comments: Fracking is a very dirty and unhealthy practice and should be kept out of Hawaii at all costs. Many states that engage in fracking are now regretting it due to illness in the citizens and complete visual devestaion to the landscape.

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
darcy henderson	Individual	Oppose	No

Comments: OPPOSING THE USE OF HYDRAULIC FRACTURING IN HAWAII.

SR123
Aloha,

KOKUA = Reject even the most remote possibility of FRACKING ever happening in these islands in the middle of the ocean. WOT, can break off part of one of our islands?

Our islands are already fractured in their creation by Pele. You really think it's possible to screw around and not do any damage???? GET A GRIP. Every thing we "develop" ends up trash, including those windmill piles of junk within 15-20 years. And don't get me started on undersea power transmission cable through the middle of our Marine Sanctuary, and the damage probable with that piece of kukai.

Mahalo for your service and your kokua in caring for our land and sea.

Aloha, Pohakamalamalama P. Palmer

ENE/WTL 225 Mar 28, 2013 2:45 PM
Testimony regarding SCR123 / SR86
Position: Strong support

I'm writing in strong support of SCR123 and SR86. Hydraulic fracturing adds new risks to geothermal development in Hawaii. Hydraulic fracturing on the mainland has been linked to increased seismic activity. It also increases the risks of ground water and air pollution, with direct effects on the health of humans and wildlife. The technology is proving itself very dangerous, and we need to block its establishment here. Sincerely,

Norris Thomlinson
Kapoho, Hawaii

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Susan Douglas	Individual	Support	No

Comments: I strongly support SCR 123 and SR 86 is enough: 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. 3) There is a potential to pollute the ground water. Mahalo!

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Susan Douglas	Individual	Support	No

Comments: I strongly support SCR 123 and SR 86 is enough: 1) Hydraulic fracturing has been linked to seismic activity. 2) Hawaii is already prone to seismic activity. 3) There is a potential to pollute the ground water. Mahalo!

ENE/WTL 225 Mar 28, 2013 2:45 PM

Testimony RE: SCR 123 / SR 86

Position: Strong support

Gregory Paul

Fracking is proving to be a serious environmental hazard especially in earthquake prone areas. Keep fracking out of Hawaii.

Comments: If we continue to treat our planet like it is a "thing" to use however we like without regard to the environmental impact, then man deserves a mass die off or extinction. It doesn't take a rocket scientist to combine exponential human population growth with finite natural resources to see we're on a dead end road. Literally. Make decisions like you want everyone's children and grandchildren to have a future.

Dear Legislators,

Please pass both **SCR 123** and **SR 86**. Our whole ohana, composed of hundreds of Bonds on every island, does not want any kind of fracking in Hawaii.

Thank you,
Michael and Margaret Bond
P.O. Box 511
Kaunakakai, HI 96748

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Aaron Wade	Individual	Support	No

Comments: Honorable Senators, PLEASE, DO NOT SUBMIT TO INDUSTRY PRESSURE UNTIL YOU BETTER UNDERSTAND THE SCIENCE. Hydraulic Fracturing and Enhanced geothermal systems have been demonstrated world-wide to poison groundwater and generate earthquakes, which can damage infrastructure and local economies. Believe industry spin at your and our peril. There's no such thing as a free lunch. You must go outside industry biased sales pitch to see what is happening on the ground with these technologies.

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Nadia Ranne	Individual	Support	No

Comments: I strongly support SCR123 and SR86 and request that you ban fracking in Hawaii. There is so much evidence that shows how terrible fracking is for the environment, water pollution, and health of humans and animals, and more known and unknown risks. Your primary role as government is to provide for our HEALTH AND SAFETY. We desperately need you to listen to your constituents and fight the hard fight representing us against the MISINFORMED people in power and the corporations that are solely driven by profit. This is a huge issue for our community. We are not collateral damage. I live in Pahoia – near an active volcano on very porous and seismically active land. We have already witnessed the on-going problems with Puna Geothermal Venture. I am scared, angry and outraged that there is the possibility of more geothermal development and “enhanced geothermal” aka fracking in Puna - alongside residences, farms and food crops. I have two small children. We own two lots for each of them. We are almost done building our home where we envision ourselves growing old and leaving a legacy for our future generations. We give back to the community. My husband is a first responder and I worked in social work and now education. We pay taxes and vote. We should not be subjected to geothermal drilling, fracking and hydrogen production near our homes. This is outrageous! Please come to Puna and get educated on the reality of how this type of industry is negatively affecting Hawaii. Talk with us and see for yourself. The people making the decisions don't have the correct information – they are being misinformed. Please listen to the Puna Pono Alliance. They truly represent our community. We are all ready to fight for what is right and to protect the land and future. Please do not let our hopes and dreams be squashed by the huge push of money from the federal government for green energy initiatives that are too fast without enough information, rules and regulations. You need results from real health studies; and scientific data from third parties regarding health and environmental concerns. Don't let the industry self-regulate. Make sure these corporations are liable for all of the accidents and damage they have and will cause. Please read this recent article as it so closely relates to what may happen in Hawaii: <http://www.thenation.com/article/171504/fracking-our-food-supply#> Please watch the documentary "Gasland" if you haven't already: <http://www.gaslandthemovie.com/> Thank you for reading my comments. I look forward to your vote and truly hope you ban fracking in Hawaii for the health and safety of our state and future generations.

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Gina Franchini	Individual	Support	No

Comments: I look forward to your vote and truly hope you ban fracking in Hawaii for the health and safety of our state and future generations.

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ellen Schomer	Individual	Support	No

Comments:

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Martha Lind	Individual	Support	No

Comments: I support SR86 in opposing the use of hydraulic fracturing in Hawaii. Fracturing has been shown to contaminate our watersheds and drinking water. Please support this bill and OPPOSE the use of hydraulic fracturing in Hawaii! Mahalo.

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ninu-Alexandri Quirk, MD	Individual	Support	No

Comments: I strongly support a ban on fracking in Hawaii. The health effects of fracking are negative (poison chemicals and radioactivity), and the environmental effects are even worse (earthquakes, water pollution, air pollution). PLEASE ban fracking in our beautiful state. We depend on natural, unspoiled beauty for tourism.

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Henry Klein	Individual	Support	No

Comments: DO NOT FRACK PUNA. We love the aina. The current geothermal company has not respected the land or the people. We just had ANOTHER geothermal accident that spilled toxic chemicals on the people of Leilani and Pohoiki. BAN FRACKING NOW. Thank you.

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Katarina Culina	Individual	Support	No

Comments:

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Terry J Walker	Individual	Support	No

Comments:

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Mary Diehl	Individual	Support	No

Comments:

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Vera Cardinale	Individual	Support	No

Comments

Senate Committee on Energy and Environment -RE: SCR 123 / SR 86

I strongly support - ENE/WTL 225 Mar 28, 2013 2:45 PM

I am writing to express my anger that you would be considering *Hydraulic Fracturing* for our state especially Hawaii island. Hydraulic fracturing has been linked to seismic activity and Hawaii is already prone to seismic activity. Do we really want to be cracking the earth intentionally on an island with our two active volcanoes. It would seem foolish and reckless and not something you would want to add to your resume or legacy as a Hawaiian politician. Potentially it could pollute all ground waters and possibly activate a volcanic flow. The area they are presently doing Geothermal drilling had an eruption only 50 years ago. Serve the people.
PLEASE VOTE TO BAN HYDRAULIC FRACTURING.

Thank you,
Andrew Leo
pres. Hawaiian Expressions

Mar 28, 2013
Testimony RE: SCR 123 / SR 86
Position: Strong support

- 1) Hydraulic fracturing has been linked to seismic activity.
- 2) Hawaii is already prone to seismic activity.
- 3) There is a potential to pollute the ground water.

Mahalo,
Miriam Jacobson
Puna resident

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Barb Cuttance	Individual	Support	No

Comments: I strongly support this resolution. It is important that we establish clear guidelines for Fracking or Enhanced Geothermal here in Hawaii prior to any exploratory drilling being done using this method. Clearly Hawaii is not a stable environment and much research should be done before any such method gets approval here. Barb Cuttance 14/266 Papaya Farms Road Kapoho, 96778

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Sheryl K. Palmer	Individual	Support	No

Comments: It boggles the mind to try to understand what corporations think they can get away with, and yet they have. During the Bush/Cheney years the government took out the requirement that makes oil/fracking companies comply with the Clean Water Act. The mainland is having horrible problems with this extraction process. It is making communities sick, it is not only polluting the air, it is polluting wells, streams and ponds, and in North Dakota it is forcing local people to leave their apartments because complexes are being bought by the mining companies to house their own brought in labor. This is no good all around. To allow this here would be the height of stupidity. Add all of the above to the volcanic structure of this island on the rift zone? Two days after the blowout at PGV recently, Kapoho tide pools were reported to be polluted by yellowish water and many fish and other sea creatures died. Is there a connection? We will probably never know. No one seems to monitor things like this. PGV is returning polluted water to the 'aina, that we do know. Please vote to ban fracking.

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Blake Watson	Individual	Support	No

Comments:

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Kea Kapahua	Individual	Support	No

Comments:

SR86

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
David Bennett	Individual	Support	No

Comments:

SR86

Submitted on: 3/28/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Jeannine Johnson	Individual	Support	No

Comments: Why would anyone want to bring fracking to our islands?

SCR123

Submitted on: 3/27/2013

Testimony for ENE/WTL on Mar 28, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Penny Levin	Individual	Support	No

Comments: Fracking, by definition, often involves injecting spent water, along with sand and other substances into a well under high pressure in order to fracture rock, creating fissures that help natural gas or oil flow out. Wastewater injection - in other words, a form of fracking - in such cases has been linked to quakes by scientific research since the 1960s including in Colorado and most clearly in Iowa as recently as this past month. Hawaii's porous rock geologic structure, along with basalt dikes, make high pressure injection of water and other substances into the ground a very high risk, not only for earthquakes, which we have often enough, but also for contaminating perched and deep ground water sources. Of all the places to choose not to allow fracking, Hawaii should be the place. We are small islands, 2,500 miles from the mainland. We should not be so foolish as to invite disaster to the very ground under our feet. Or is the daily risks of living on very active volcanoes not exciting enough for some? Please support this bill, and move to ban fracking permanently in the next session from this beautiful state.

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Lyn Howe	Individual	Support	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Troy Lopaka Abraham	Individual	Support	No

Comments: I support passage of this bill to help promote a clean and healthy environment

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Kerri Marks	Individual	Support	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	Individual	Support	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Lawrence Ramirez	Individual	Oppose	No

Comments: Thank you for being proactive in seeing that fracking in any form has no use here in Hawaii. Thank you Chair-persons and Committee members for thinking of us. Have a great afternoon. Aloha No. Lawrence Ramirez lardg@yahoo.com

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Julia Horn	Individual	Support	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
caroline avery	Individual	Support	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Aurora Martinovich	Individual	Support	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Margaret Zerbe	Individual	Support	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Tam Mui	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Tran Quen	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
tj simms	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Tia Kent	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
penny silva	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
sue phalen	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
sam cresanto	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Suy Nathan	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
donald tran	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Chau Do	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Cotu Connors	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Pua Kamaoa	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
michael hawthorne	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
missy kouma	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Mondiau Simmons	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
liensa nguyen	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Nga Nitaman	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Nate Wolford	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Faye Ford	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Frank Williams	Individual	Oppose	No

Comments:

SCR123

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Toni Auld Yardley	Individual	Support	No

Comments: Malama Tutu Pele. Malama Pono. Hawai'i Pono'i.

SCR123

Submitted on: 4/2/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Carl York	Individual	Support	No

Comments:

SR86

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
April Lee	Individual	Support	No

Comments: Aloha, Mahalo to our legislators? It is clearly a destructive method and harmful to people and the environment. Lets hope the others can sit down with their critical faculties and weigh the facts...they are in on "fracking". Mahalo to the signors of this resolution! April Lee

SR86

Submitted on: 4/1/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Cory Harden	Individual	Support	No

Comments: Hello Senators, we know there are problems with geothermal and with fracking...so why do we want to do both at once? Mahalo.

SR86

Submitted on: 4/2/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
sherrian witt	Individual	Support	No

Comments:

SCR123

Submitted on: 4/2/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Jade Rosa	Individual	Support	No

Comments: We need to stop fracking from taking over our planet. It is difficult to watch as our beautiful home is constantly being overrun by politicians and special interest groups who are only interested in big pay outs. We cannot allow this practice to be used on our fragile islands where the already endangered, native species are struggling to survive. As it is states in the bill itself, "it is not clear whether present statutes and regulations adequately protect against the potentially adverse impacts of hydraulic fracturing". Please stand with the kanaka maoli and our land when pushing to pass this bill. Thank you for your time.

SCR123

Submitted on: 4/2/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Support	No

Comments: Strongly support. Geothermal Hydraulic fracturing is dinosaur thinking that poses great harm to the Hawai'i environment. I have researched this issue in depth and am convinced that allowing geo fracking is very bad news for the State of Hawai'i.

SCR123

Submitted on: 4/2/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Murray	Individual	Support	No

Comments: We're supporting the bill that opposes geo fracking. Mahalo!

SCR123

Submitted on: 4/2/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Avi Okin	Individual	Support	No

Comments: I agree. Hawaii is not a place to allow fracking. Our land is very limited as is our stored drinking water. We do not need to allow additional chemicals into our land that very well will seriously degrade our stored water supply.

SR86

Submitted on: 4/2/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Caki Kennedy	Individual	Support	No

Comments: Please use your heads and look at the environmental dangers fracking incurs!!! We can't afford this!

Elaine Dunbar
POB 861
Lihue, Hi 96766
inunyabus@gmail.com

Measure Title: OPPOSING THE USE OF HYDRAULIC FRACTURING IN HAWAII.
Report Title: Hydraulic Fracturing; Conservation and Resources

SCR123 - SUPPORT

Aloha Committee Chair and Members,

We can safely say **Fracking** is the same as **Geothermal drilling**. I don't think it's necessary to debate the lingo on a procedure that functions with the **same technique** only differences being the use of chemicals or millions of gallons of water.

The constants with Geothermal and/or Fracking are:

- **Earthquakes.** Hawaii is a smaller land mass, compared to the continental U.S. therefore, sporadic earthquakes would be more devastating for these islands.
- Significant negative experiences with Geothermal/Fracking in Hawaii are already known first-hand.
- Each drill area holds no guarantee of an energy source so there will be **multiple tries** (by EACH applicant).
- Hawaii has **lava tubes** making it even more hazardous than the continental U.S.
- If a drill is successful, the energy obtained is **minimal, unreliable, unstable and short-lived.**
- Once applicants are granted permits, will they also own the **mineral rights** as well?
- Where will the line be drawn for **numerous permits**?

Please do not entertain Geothermal/Fracking in Hawaii. If we have come so far over carrying capacity, that we have to commit the ultimate sacrilege by **blasting the islands** then we have failed; an epic failure it will be. And all so a few can profit.

Please don't make this your legacy.

SCR123

Submitted on: 4/3/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Richard Ha	Individual	Oppose	No

Comments: Aloha Chair Gabbard, Vice Chair Ruderman and Senators; The BICC is strongly opposed to a resolution that abolishes fracking without knowing what it is about. There is no gas and oil and no methane leak possible. I visited a geothermal plant in the Phillipines that last erupted 100,000 years ago. The cost of geothermal electricity on the Big Island is approx 10 cents per kilowatt hour. Say that is what it cost to generate electricity on Oahu from that source, add that to the 10 cents or less to transmit that electricity and you get 20 cents or less per kilowatt hour. Why would you foreclose that option? What about the rubbah slippah folks, their electricity and water costs are killing them. There was nearly 50,000 gas and oil wells drilled in the US in 2011 and 2012. Its a mature industry. Don't ban something that might be helpful to the rubbah slippah folks. Richard Ha, steering committee member Big Island Community Coalition. Members are; Dave DeLuz Jr-pres Big Island Toyota, John E K Dill-chair ethics committee, Michelle Galimba, Rancher, Board of Ag member, Rockne Freitas, Former Chancellor Hawaii Community College; Richard Ha, HCEI steering committee member, farmer; Wallace Ishibashi, Royal Order of Kamehameha-former chair Big Island Labor Alliance; Kuulei Kealoha Cooper- Administrator Kealoha Estate; Noe Kalipi, Former staffer Sen Akaka, helped to write the Akaka Bill; Ka'iu Kimuea, Executive Director of Imiloa, Robert Lindsey, Big Island Trustee, OHA; Monty Richards-Kamaaina cattleman; Marcia Sakai, Vice Chancellor UH Hilo, Kumu Lehua Veincent, Kamehameha High School principal, Kea'au Campus; William Walter, President Shipman Estate.

SCR123

Submitted on: 4/3/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Edmund Lee	Individual	Support	No

Comments:

COMMITTEE ON ENERGY AND ENVIRONMENT
Senator Mike Gabbard, Chair
Senator Russell E. Ruderman, Vice Chair

COMMITTEE ON WATER AND LAND
Senator Malama Solomon, Chair
Senator Maile S.L. Shimabukuro, Vice Chair

Thursday April 4, 2013
Conference Room 225
2:45 PM

Testimony in Opposition to SCR123/SR 86

Opposing the use of hydraulic fracturing in Hawaii

Submitted by:
Donald Thomas

I am a member of the research faculty at the University of Hawaii and have conducted both applied as well as basic research in the field of earth sciences for 40 years. I present the following testimony in opposition to **SCR123/SR 86**.

I oppose the passage of SCR123/SR 86 for the following reasons:

There is no pressing need to ban hydraulic fracturing in Hawaii because no one is currently proposing to conduct such activities in the context of geothermal development or any other process that I am aware of. Other testimony has alleged that my DOE-funded research is contemplating the use of hydraulic fracturing – and which may be the basis for one of the “Whereas” clauses in the Resolution; there is no basis whatever to that allegation. My research has no relationship to hydraulic fracturing nor has it any likelihood of involving such technology. My work will apply passive geophysical techniques to the identification of prospective geothermal resources and attempt to develop better methods of mapping fluid flow within groundwater and hydrothermal systems.

The basis and justification for passing such a resolution appears to rely on false or irrelevant information: the hydraulic fracturing that was referred to in the initial version of this legislation was that associated with the recovery of oil and gas in sedimentary formations in North America. The geology in those formations is fundamentally different from that in Hawaii: the fears of contamination of groundwater, which have carried through to the current resolution, are based on the escape of hydrocarbons from the sedimentary formations, but Hawaii has no hydrocarbon formations to produce that contamination. Further, the technology applied to hydrocarbon recovery has little relevance to any conceivable application of hydraulic fracturing in Hawaii: in the former, extremely broad scale disruption of the geologic formations is required to maximize recovery of the fossil resource. In the engineering work that I am familiar with for the latter technology, the intent is to develop

much more limited connections among injection and heat recovery wells; the development of broad scale fracturing, which reduces the efficiency of heat recovery, is a condition to be avoided.

There is an existing regulatory framework already in place that adequately protects the public interest and will manage any future proposals for the use of this technology: the Department of Health and the Department of Land and Natural Resources have authority over injection and geothermal wells respectively. They have, or can access, the necessary expertise, outside of the political arena, to regulate the composition of injection fluids (as they already do for wastewater wells) and to manage the uses of geothermal wells, including the imposition of any necessary monitoring, research, or safeguards in the event that future proposals are put forward to apply this technology. The underlying intent of this resolution appears to be an effort to circumvent that regulatory framework for no tangible benefit to the health and safety of Hawaii's residents.

If there are concerns among legislators regarding possible impacts of future proposals to apply the enhanced geothermal technologies here in Hawaii, a more productive resolution would be one encouraging the relevant regulatory agencies, in the event that such a proposal is made, to seek out appropriate expertise to:

1. Evaluate the risks of those impacts, that are of concern to the public and the legislators, to occur from the proposed hydraulic fracturing;
2. Work with regulatory agencies from jurisdictions where hydraulic fracturing has been employed, with earth scientists, and with disinterested industry experts, to develop regulatory conditions for safeguards, monitoring, or limitations on the proposed application that will minimize or eliminate potential adverse impacts that are relevant to the geologic and hydrologic conditions present in Hawaii.

This testimony reflects my views alone and is not an official statement of the University of Hawaii. Thank you for this opportunity to offer testimony.

TESTIMONY to the Senate Committee on Energy and Environment &
Senate Committee on Water and Land

SR86 and SCR123 Relating to Use of Hydraulic Fracturing in Hawaii
Thursday, April 4, 2013
2:45 PM -- State Capitol Conference Room 225

Submitted by: Mary Smart, Mililani, HI 96789 **In OPPOSITION**

Chairman Gabbard, Vice-Chair Ruderman, Chairwoman Solomon, Vice-Chair
Shimabukuro and Committee Members

1. SR 86 and SCR 123 are written only to show possible negative impacts which can be avoided with proper measures. Hydraulic Fracking has been used for over 60 years and has proven to be beneficial to the environment and economy. Many studies have been done which show measures can be taken to prevent the adverse conditions mentioned in the resolutions. A very informative document is titled "Fact-Based Regulation for Environmental Protection in Shale Gas Development." The Huff Post article from June 2012 reported that there is low risk for large tremors as a result of fracking. In a 2004 study, "The EPA concluded that there was little to no risk of fracturing fluid contaminating underground sources of drinking water during hydraulic fracturing of coalbed methane production wells." According to the Petroleum Economist, UK geologist say fracking is safe.
2. Becoming energy independent is an important goal for our State. Hawai'i should not preclude the use of a very valuable and safe source of energy for our island based on hearsay and faulty research. Hawai'i can require a report to address all concerns listed in the resolution prior to allowing fracking. Opposing fracking is short-sighted and not in the best interest of the residents of Hawai'i.
3. Hawai'i has wasted funds on windmills that have rusted, kill birds, burned, and don't produce a significant portion of our energy needs and pollute the landscape. They can't be used in heavy winds. Some of the renewable energy gambits the State has embarked on are not completely reliable. Solar doesn't provide a steady source of energy. There is no solar production from sunset to sunrise or on cloudy days. Hawai'i needs a steady and reliable source of energy and fracking may be the best means of extracting resources.
4. Energy from hydraulic-fracking could benefit Hawai'i. According to Keith Mauck in the Wall Street Journal on January 1, 2013 "The fracking-facilitated development of shale gas and oil could create two million new jobs and billions in tax revenue over the next two decades, according to the research firm IHS Global Insight. Rather than look for reasons to stand in its way, the federal government should embrace hydraulic fracturing and take full advantage of its economic and security benefits." Hawaii should cautiously embrace fracking as well.

SCR123

Submitted on: 4/3/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Angela Breene	Individual	Support	No

Comments: Aloha, We cannot allow geothermal fracking in Hawaii because of the environmental devastation that will result. Please support this bill. Mahalo, Angela Breene Haleiwa, HI

SCR123

Submitted on: 4/4/2013

Testimony for ENE/WTL on Apr 4, 2013 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Henry Curtis	Life of the Land	Support	Yes

Comments: