



## DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804  
Web site: [www.hawaii.gov/dbedt](http://www.hawaii.gov/dbedt)

DAVID Y. IGE  
GOVERNOR

LUIS P. SALAVERIA  
DIRECTOR

MARY ALICE EVANS  
DEPUTY DIRECTOR

Telephone: (808) 586-2355  
Fax: (808) 586-2377

Statement of  
**LUIS P. SALAVERIA**  
**Director**  
Department of Business, Economic Development, and Tourism  
before the  
**HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION**

Tuesday, February 16, 2016  
10:00 a.m.  
State Capitol, Conference Room 325

in consideration of  
**HB 2080, HD1**  
**RELATING TO FUEL CELL ELECTRIC VEHICLES.**

Chair Lee, Vice Chair Lowen, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) supports House Bill 2080, HD1, which amends the definition of electric vehicles to include fuel cell electric vehicles (FCEV), and grants procurement priority for fuel cell electric vehicles for state and county vehicle purchases.

DBEDT acknowledges the appropriateness of aligning incentives of hydrogen FCEVs to electric vehicles, since both have potential, significant public policy benefits relating to electrical grid management and efficiency. Electric drive vehicles also have zero tailpipe emissions which will contribute to carbon dioxide reductions in support of Act 234 (2007). Including FCEVs into the definition of electric vehicle is an actionable step that sends a signal to industry that Hawaii supports the deployment of advanced transportation technologies and the development of hydrogen fueling infrastructure as a critical measure of the Hawaii Clean Energy Initiative.

As this measure concerns State facility management and the regulation of high occupancy vehicle lanes, DBEDT respectfully defers to the Hawaii Department of Accounting and General Services and the Hawaii Department of Transportation on those matters.

Thank you for the opportunity to provide these comments regarding HB 2080, HD1.



Written Statement of  
**Robbie Melton**  
Executive Director & CEO  
High Technology Development Corporation  
before the  
**House Committee on Energy & Environmental Protection**  
Tuesday, February 16, 2016  
10:00 a.m.  
State Capitol, Conference Room 325

In consideration of  
**HB2080 HD1**  
**RELATING TO FUEL CELL ELECTRIC VEHICLES.**

Chair Lee, Vice Chair Lowen, and Members of the Committee on Energy & Environmental Protection.

The High Technology Development Corporation (HTDC) **supports** HB2080 HD1 which amends the definition of electric vehicles to include fuel cell electric vehicles (FCEV), and grants procurement priority for fuel cell electric vehicles for state and county vehicle purchases.

Since 1993 HTDC's Hawaii Center for Advanced Transportation Technologies (HCATT) program has been awarded more than \$40 million in federal funds matched by another \$23 million from private partners to develop advanced low emission and zero emission vehicles centered on electric drive technologies. In the past 5 years, HCATT has been focused on fuel cell electric vehicle demonstration projects.

HTDC understands it is important to treat hydrogen FCEVs similarly to electric vehicles, since both have zero tailpipe emissions and the potential to utilize renewable energy sources. Including FCEVs into the definition of electric vehicle is an actionable step that sends a signal to industry that Hawaii is interested in the deployment of advanced transportation technologies and the development of hydrogen fueling infrastructure.

As this measure concerns State facility management and the regulation of high occupancy vehicle lanes, HTDC respectfully defers to the Hawaii Department of Accounting and General Services and the Hawaii Department of Transportation.

Thank you for the opportunity to offer these comments.



COLLEGE OF SOCIAL SCIENCES

# HAWAII ENERGY POLICY FORUM

UNIVERSITY OF HAWAI'I AT MĀNOA

## Hawaii Energy Policy Forum

Jeanne Schultz Afuvai, Hawaii Inst. for Public Affairs  
Karlle Asato, Hawaii Government Employees Assn  
Joseph Boivin, Hawaii Gas  
Warren Bollmeier, Hawaii Renewable Energy Alliance  
Michael Brittain, IBEW, Local Union 1260  
Albert Chee, Chevron  
Elizabeth Cole, The Kohala Center  
Kyle Datta, Ulu pono Initiative  
Mitch Ewan, UH Hawaii Natural Energy Institute  
Jay Fidell, ThinkTech Hawaii  
Carl Freedman, Haiku Design & Analysis  
Matthias Fripp, REIS at University of Hawaii  
Ford Fuchigami, Hawaii Dept of Transportation  
Mark Glick, Hawaii State Energy Office, DBEDT  
Justin Gruenstein, City & County of Honolulu  
Dale Hahn, Ofc of US Senator Brian Schatz  
Michael Hamnett, SSRI at University of Hawaii  
Senator Lorraine Inouye, Hawaii State Legislature  
Randy Iwase, Public Utilities Commission  
Ashley Kaono, Ofc of US Representative Tulsi Gabbard  
Jim Kelly, Kauai Island Utility Cooperative  
Darren Kimura, Energy Industries  
Kelly King, Sustainable Biodiesel Alliance  
Kal Kobayashi, Maui County Energy Office  
Representative Chris Lee, Hawaii State Legislature  
Gladys Marrone, Building Industry Assn of Hawaii  
Stephen Meder, UH Facilities and Planning  
Sharon Moriwaki, UH Public Policy Center  
Tim O'Connell, US Dept of Agriculture  
Jeffrey Ono, Division of Consumer Advocacy, DCCA  
Stan Osserman, HCATT  
Darren Pai, Hawaiian Electric Companies  
Melissa Pavlicek, Hawaii Public Policy Advocates  
Randy Perreira, Hawaii Government Employees Assn  
Rick Reed, Hawaii Solar Energy Assn  
Cynthia Rezentes, Ofc of US Representative Mark Takai  
Rick Rocheleau, UH Hawaii Natural Energy Institute  
Will Rolston, Hawaii County, Research & Development  
Riley Saito, SunPower Systems  
Scott Seu, Hawaiian Electric Companies  
Joelle Simonpietri, US Pacific Command Energy Ofc  
H. Ray Starling, Hawaii Energy  
Ben Sullivan, Kauai County  
Lance Tanaka, Par Hawaii, Inc.  
Maria Tome, Public Utilities Commission  
Alan Yamamoto, Ofc of Senator Mazie Hirono

## Testimony of the Hawaii Energy Policy Forum Before the

House Committee on Energy & Environmental Protection  
February 16, 2016 at 10:00 am in Conference Room 325

### In **SUPPORT OF HB 2080 HD1** Relating to Fuel Cell Electric Vehicles

Chair Lee, Vice-Chair Lowen, and Members of the Committee,

The Hawaii Energy Policy Forum ("HEPF"), created in 2002, is comprised of over 40 representatives from Hawaii's electric utilities, oil and natural gas suppliers, environmental and community groups, renewable energy industry, and federal, state and local government, including representatives from the neighbor islands. Our vision, mission and comprehensive "10 Point Action Plan" guide us in moving Hawaii toward its preferred energy goals and our support for HB2080 HD1.

HB 2080 HD1 clarifies that fuel cell powered vehicles are "electric vehicles" that use a fuel cell to convert hydrogen gas and oxygen into electricity to power one or more onboard electric motors to propel the vehicle.

The Forum supports this measure that would provide fuel cell electric vehicles with the same "market pull" incentives as those enjoyed by battery electric vehicles, i.e., parking fee exemptions and HOV lane use. It also directs all state and county agencies, when purchasing new vehicles, to consider fuel cell electric vehicles.

The Forum supports HB 2080 HD1, and respectfully urges passage of the bill.

Thank you for the opportunity to testify.

*This testimony reflects the position of the Forum as a whole and not necessarily of the individual Forum members or their companies.*



Bill van den Hurk, President  
Dave Rolf, Executive Director

**HADA Testimony  
in SUPPORT  
of HB 2080 HD1**

**RELATING TO FUEL CELL ELECTRIC VEHICLES**

Presented to the House Committee on Energy & Environmental Protection  
at the public hearing 10 a.m. February 16, 2016  
in conference room 325, Hawaii State Capitol

Chair Lee, Vice Chair Lowen, and members of the committee:

**The Hawaii Automobile Dealers Association, on behalf of the 68 franchised new-car dealers in the State of Hawaii, who employ 4,215 men and women across the state and who account for almost 15% of the state's retail economy, respectfully submits testimony in SUPPORT of HB 2080 HD1, Relating to Fuel Cell Electric Vehicles.**

The bill includes fuel cell electric vehicles in the definition of electric vehicles for purposes of parking exemptions, HOV lane use, registration, and required parking spaces in places of public accommodation.

HADA dealers continue to ardently support of the goals of the Hawaii Clean Energy Initiative and the adoption of renewable energy vehicles.

Hawaii continues to maintain its ranking as one of the top states in percentage of renewable energy electric vehicles sold compared to internal combustion vehicles.

Initiatives, created by the legislature, like the use of High Occupancy Vehicle lanes with only one occupant, and the provision of limited free parking at designated public sites has encouraged the adoption of these electric vehicles.

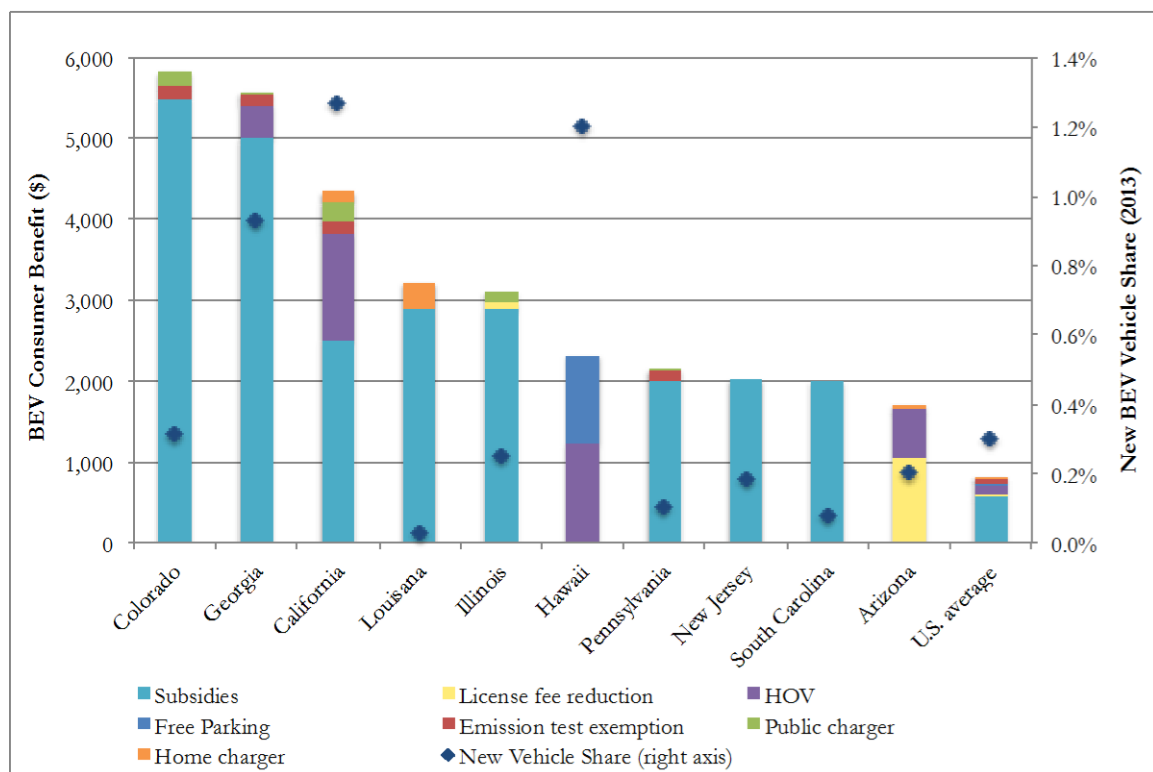
HADA believes Hawaii's high electric vehicle adoption rate provides a model for a similarly high Hydrogen Fuel Cell Electric Vehicle adoption rate, if similar public policy provisions like use of HOV lanes and free parking incentives are provided to HFCEV purchasers.

An April 2015 study by the University of Hawaii, Economic Research Organization, "Factors Affecting EV Adoption: A Literature Review and EV Forecasts for Hawaii" shows the value of HOV lane use and free parking incentives in creating high adoption rates for electric vehicles.

## Policy Mechanisms

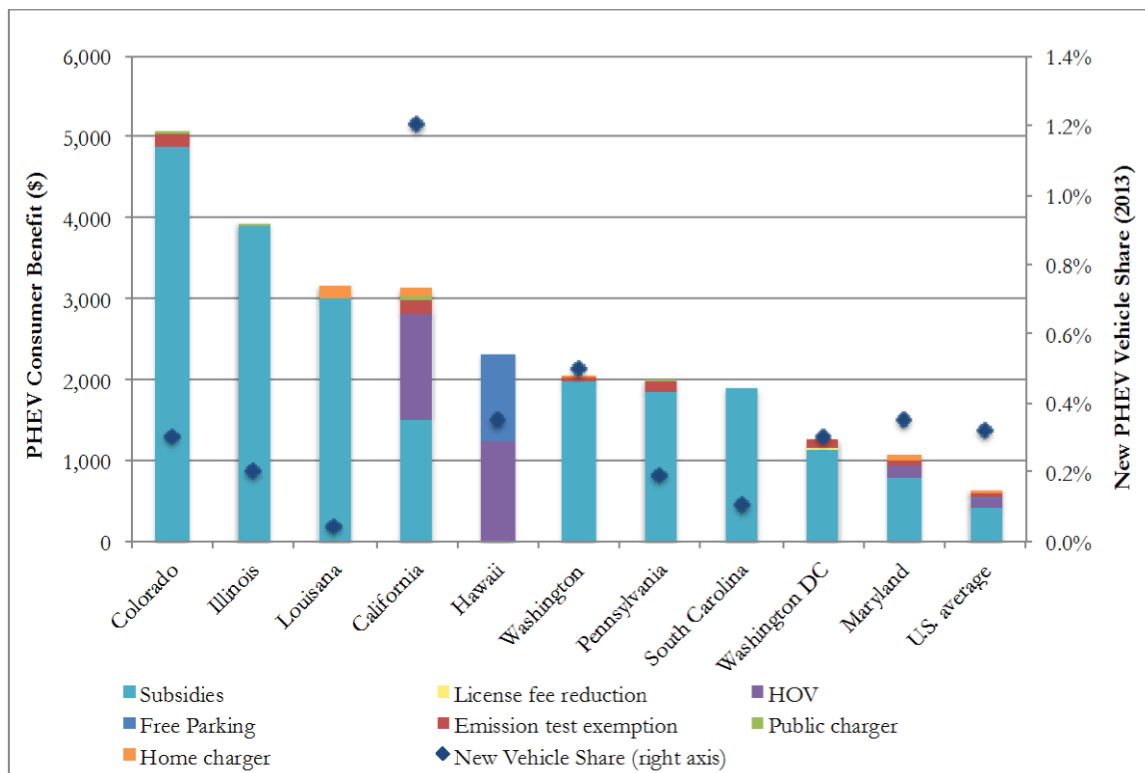
Policy mechanisms available to support EV adoption include *subsidies and other incentives, supporting infrastructure build-up and raising awareness.*

Gallagher and Muehlegger (2011) use national HEV sales data per capita to assess the impacts of incentives such as access to HOV lanes, tax credits, sales tax rebates, and gas prices. They found that gas prices and tax incentives significantly impact sales, where the rebate has a larger effect than the credit. They found that access to HOV lanes is significant in some states.



Source: Recreated from Jin et al. (2014).

**Figure 7. PHEV Consumer Benefit and EV Market Share by State**



Source: Recreated from Jin et al. (2014). 17

Jin et al. (2014) found that the most valuable state incentives are direct subsidies, though **access to HOV lanes is also notable**. Hawaii is found to rank sixth in regards to EV incentives, where they are valued at about \$1,200 for HOV lane access and about \$1,000 for free parking at metered stalls (for BEVs).

Many carmakers are preparing to shift to hydrogen fuel cells.

“....automakers are increasingly betting the future of green cars on hydrogen fuel cell technology.”

--Charles Fleming LA Times story 11/18/14

One HADA member already has brought in a hydrogen fuel cell electric vehicle for sale to the general public.

Public policy initiatives like providing HOV lane use for HFCEVs and providing limited free parking, like that offered to EV owners in Hawaii, will provide much needed incentives for the purchase of the renewable energy Hydrogen Fuel Cell Electric Vehicles needed to meet the goals of the Hawaii Clean Energy Initiative.

For the aforementioned reasons, the Hawaii Automobile Dealers Association respectfully requests the committee's support for passage of HB2080 HD1.

Respectfully submitted,  
David H. Rolf  
Hawaii Automobile Dealers Association  
1100 Alakea St. Suite 2601  
Honolulu, Hawaii 96813  
Tel: 808 593-0031

**Testimony of  
Gary M. Slovin / Mihoko E. Ito  
on behalf of  
The Alliance of Automobile Manufacturers**

DATE: February 15, 2016

TO: Representative Chris Lee  
Chair, Committee on Energy and Environmental Protection

*Submitted via [EEPtestimony@capitol.hawaii.gov](mailto:EEPtestimony@capitol.hawaii.gov)*

RE: **H.B. 2080, H.D.1 – Relating to Fuel Cell Electric Vehicles**  
**Hearing Date: Tuesday, February 16, 2016, 10:00 a.m.**  
**Conference Room: 325**

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Dear Chair Lee and Members of the Committee on Energy and Environmental Protection:

The Alliance of Automobile Manufacturers (“Alliance”) would like to express **support** for H.B. 2080, H.D.1. The Alliance is a trade association of twelve car and light truck manufacturers including BMW Group, Fiat Chrysler Automobiles, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of North America, and Volvo.

Automobile manufacturers have invested billions in the research and development of hydrogen technology, and the Alliance is very supportive of efforts to increase the availability of passenger fuel cell electric vehicles. H.B. 2080, H.D.1 would clarify that battery electric vehicles and fuel cell electric vehicles are both electric vehicles for purposes of encouraging early adoption of fuel cell electric vehicles.

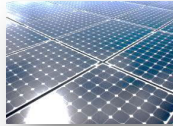
Thank you for the opportunity to submit testimony in support of this measure.

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Gary M. Slovin  
Mihoko E. Ito  
C. Mike Kido  
Tiffany N. Yajima

999 Bishop Street, Suite 1400  
Honolulu, HI 96813  
(808) 539-0840





**LATE**

**HOUSE COMMITTEES ON ENERGY & ENVIRONMENTAL PROTECTION  
AND WATER & LAND**

February 16, 2016, 10:00 A.M., Room 325  
(Testimony is 1 page long)

**TESTIMONY IN SUPPORT OF HB 2080 HD1**

Aloha Chairs Lee and Yamane, Vice Chairs Lowen and Cullen, and members of the Committees:

Blue Planet Foundation supports HB 2080 HD1, which would include fuel cell electric vehicles in the state's definition of electric vehicles and grants procurement priority for fuel cell electric vehicles for public fleets.

As it is a policy of the state to eliminate imported fuels from the ground transportation and electricity sectors, we believe that fuel cell electric vehicles have the potential to help the state gain greater energy independence in both sectors. Hydrogen is a fuel which when combusted produces no green house gas emissions or other air pollutants. It can be produced from renewable sources of energy such as wind and solar.

As increasing amounts of renewable energy are added to Hawaii's electricity portfolio, it is anticipated that there will be an increasing potential for curtailed energy and increasing need for energy storage. Producing hydrogen from curtailed wind or solar power will be a cost effective way to capture that energy and then make it available for ground transportation. Therefore fuel cell vehicles have the potential to increase the cost effectiveness of wind and solar power generation while at the same time displacing gasoline and diesel imports for ground transportation.

Given the tremendous potential economic and environmental benefits of fuel cell vehicles, we believe it is appropriate to incentivize them by granting them with public fleet procurement priority and allow them to enjoy the same benefits as battery electric vehicles.

Thank you for the opportunity to testify.

**Servco Pacific Inc. testimony in SUPPORT of  
HB2080  
Relating to Fuel Cell Electric Vehicles**

Presented to the House Committee on Energy & Environmental Protection and Water & Land  
at the public hearing to be held on Tuesday, February 16, 2016 at 10:00 a.m. in Conference  
Room 325, Hawaii State Capitol

Aloha Chair Lee, Chair Yamane, Vice Chair Lowen, Vice Chair Cullen, and Members of the  
Committees:

Servco Pacific Inc. (Servco) supports this measure that would provide fuel cell electric vehicles  
with the already available incentives afforded to battery electric vehicles (i.e. parking fee  
exemptions, HOV lane use).

A Hydrogen Fuel Cell Vehicle (HFCV) is an electric vehicle which uses fuel cell technology to  
convert hydrogen and oxygen into electricity to power one or more onboard electric motors.  
The only emission of the HFCV is water. As the second state in the U.S. to do so, Servco has  
recently introduced the Toyota Mirai HFCV to Hawaii with plans for retail sales of the vehicle  
to start later this year.

Toyota started its fuel cell vehicle development in 1992 and demonstrated its first fuel cell  
vehicle at a parade in Osaka, Japan in 1996. The 2016 model year Toyota Mirai, which  
launched in Japan as a production vehicle in late 2014, has a driving range of 312 miles,  
refueling time of about 5 minutes and the driving experience and performance similar to  
gasoline engine vehicles. Hydrogen fuel cell vehicles provide Zero Vehicle Emissions with  
minimal compromise and lifestyle change.

Passing HB2080 will help to acknowledge hydrogen technology as a viable option for  
renewable fuel technologies and can help Hawaii fulfill the goals of the Hawaii Clean Energy  
Initiative (in the ground transportation sector) to reduce fossil fuel use by 40% through use of  
renewable fuels and 30% by efficiencies by 2013 thereby making a positive impact on current  
and future generations of Hawaii.

Servco supports HB2080 and encourages all committee members to support passage of the bill.

Thank you for the opportunity to testify.

**Testimony in SUPPORT of  
HB2080  
Relating to Fuel Cell Electric Vehicles**

Presented to the House Committee on Energy & Environmental Protection  
at the public hearing to be held on Tuesday, February 16, 2016 at 10:00 a.m.  
in Conference Room 325, Hawaii State Capitol

Aloha Chair Lee, Vice Chair Lowen, and Members of the Committee:

My name is Casey Nishimura and I'm writing in **strong support of HB2080** that would provide fuel cell electric vehicles with the already available incentives afforded to all-battery electric vehicles (i.e. parking fee exemptions, HOV lane use).

This measure would go a long way to incentivize use of another clean transportation technology in Hawaii. With a 312-mile range and 5-minute refueling time, the Toyota Mirai is one example of a fuel cell vehicle that provides the same performance as a gasoline vehicle with no harmful emissions. In fact, the only emission is water.

It is also worth noting that hydrogen can be extracted from water using clean and renewable sources of energy such as solar, ocean and wind. This means that hydrogen can be produced on-site at filling stations helping Hawaii become more self-reliant and reduce our dependency on imported oil.

Hybrids, fuel cell and all-battery electric vehicles can make ideal partners in helping Hawaii increase efficiency and reduce carbon emissions in the transportation sector. Please support the passage of HB2080 and help acknowledge hydrogen fuel cell technology as one viable option for renewable fuel technologies in Hawaii.

Mahalo for the opportunity to submit testimony.

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, February 15, 2016 10:32 PM  
**To:** EEPtestimony  
**Cc:** hawaiifishingfanatic@gmail.com  
**Subject:** \*Submitted testimony for HB2080 on Feb 16, 2016 10:00AM\*

**HB2080**

Submitted on: 2/15/2016

Testimony for EEP on Feb 16, 2016 10:00AM in Conference Room 325

Submitted By	Organization	Testifier Position	Present at Hearing
Don Aweau	Individual	Support	No

**Comments:**

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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