STAND. COM. REP. NO.

Honolulu, Hawaii

FEB 2 0 2009

RE: S.B. No. 1096 S.D. 1

Honorable Colleen Hanabusa President of the Senate Twenty-Fifth State Legislature Regular Session of 2009 State of Hawaii

Madam:

Your Committees on Economic Development and Technology and Higher Education and Education and Housing, to which was referred S.B. No. 1096 entitled:

"A BILL FOR AN ACT RELATING TO TECHNOLOGY WORKFORCE AND DEVELOPMENT,"

beg leave to report as follows:

The purpose of this measure is to reaffirm the Legislature's initial commitment to expand outstanding and new Science-, Technology-, Engineering-, and Math-Related (STEM) programs in Hawaii's public schools and public charter schools by providing additional funds to ensure that all schools desiring to join in providing STEM programs for their students will be able to participate between 2008-2012.

Testimony in support of this measure was submitted by the Department of Business, Economic Development and Tourism, the Department of Education, the University of Hawaii College of Engineering, the Hawaii Association of Independent Schools, the Hawaii Educational Networking Consortium, the Hawaii Agricultural Research Center, the American Public Works Association, the Hawaii Crop Improvement Association, 3D Innovations, and three concerned individuals. Comments on this measure were submitted by the Department of Human Services. Written testimony presented to your Committees is available for review on the Legislature's website.

The 2007 Legislature strongly endorsed initiatives related to STEM fields, and creative media education as the most practical,



STAND. COM. REP. NO. 377

hands-on means of increasing students' interest in pursuing math/science and technology careers. All STEM proposals were evaluated against the backdrop of existing, successful math/science and related initiatives. Emphasizing the need to build upon solid performance outcomes, the Legislature enacted Act 111, Session Laws of Hawaii 2007 (Act 111), and Act 271, Session Laws of Hawaii 2007 (Act 271). Act 111 expanded existing STEM programs like robotics (including FIRST Lego League, Junior FIRST Lego League, botball, underwater ROV, VEX, Micro-Robot, and robotics camps) and Research Experiences for Teachers - Middle School. Act 271 expanded Project EAST, the Project Environmental and Spatial Technology program.

At the same time, Act 111 funded new programs (like the Hi-EST Academy, applied learning high school academies, business/education internships, and related STEM teacher development) in a pilot environment to provide the Department of Education, the University of Hawaii, individual schools, and their tech partners with an opportunity to work through initial set-up requirements and to produce a well-tested model for future expansion.

The initial Legislative targets for 2007-2008 were to double the existing forty-eight STEM, Research Experiences for Teachers – Middle School, Project Environmental and Spatial Technology, and robotics programs within public schools to achieve a level of eighty-four school initiatives. Based on strong demand from individual schools and stellar tournament results, the number of schools desiring to participate in STEM initiatives funded by Act 111 and Act 271 far exceeds the 2008 target.

At the highest level of robotics team competition, the number of For Inspiration and Recognition of Science and Technology (FIRST) robotics teams has grown from four participating high schools in 2007 to twenty-five Hawaii high school teams (including public and private schools) in 2008. The March 2008 FIRST Robotics Regional Tournament in Honolulu included thirty-eight schools competing for the National FIRST Championships (held in April 2008 in Georgia).

Your Committees find that in 1999 the total number of students involved in robotics programs was fifty, and in 2008 the number was one thousand seven hundred. These innovative educational programs help to ensure the success of Hawaii's



STAND. COM. REP. NO. 377

students in the global economy, and prepare students for further education and future employment opportunities.

Your Committee has amended this measure by:

- (1) Removing the appropriation to the Department of Human Services to augment funding for STEM programs; and
- (2) Removing specific amounts in the appropriation sections.

As affirmed by the records of votes of the members of your Committees on Economic Development and Technology and Higher Education and Education and Housing that are attached to this report, your Committees are in accord with the intent and purpose of S.B. No. 1096, as amended herein, and recommend that it pass Second Reading in the form attached hereto as S.B. No. 1096, S.D. 1, and be referred to the Committee on Ways and Means.

> Respectfully submitted on behalf of the members of the Committees on Economic Development and Technology and Higher Education and Education and Housing,

JILL TOKUDA, Chair

Cond Juhanagen

CAROL FUKUNAGA Chair

NORMA**N/**SAKAMOTO, 🖊 Chai



#### The Senate Twenty-Fifth Legislature State of Hawaii

### Record of Votes Committee on Economic Development and Technology EDT

Bill / Resolution No.:* C SBIO94	Committee Referral: EDT/HRE/EPH Date: 2-13-09							
The committee is reconsidering its previous decision on this measure.								
The Recommendation is:								
Pass, unamended Pass, with amendments Hold Recommit 2312 2311 2310 2313								
Members		Aye	Aye (WR)	Nay	Excused			
FUKUNAGA, Carol (C)		V		· · · · · · · · · · · · · · · · · · ·				
BAKER, Rosalyn H. (VC)		V						
HEE, Clayton		1.000 and		1.14 - 14 - Garrison and American	レ			
IGE, David Y.		V						
SLOM, Sam			1. Souther the Constant					
TOTAL		4						
Recommendation:								
Chair's or Designee's Signature: Resaly H Pake								
Distribution: Original Yellow Pink Goldenrod   File with Committee Report Clerk's Office Drafting Agency Committee File Copy								

## \*Only one measure per Record of Votes

#### The Senate Twenty-Fifth Legislature State of Hawaii

### Record of Votes Committee on Higher Education HRE

Bill / Resolution No.:*	Committee Referral: Date:							
SB 1096	EDT/HRE/EDH, NAM 2/17/09							
The committee is reconsidering its previous decision on this measure.								
If so, then the previous decision was to:								
The Recommendation is:								
Pass, unamended Pass, with amendments Hold Recommit 2312 2311 2310 2313								
Members		Aye/	Aye (WR)	Nay	Excused			
TOKUDA, JIII N. (C)								
SAKAMOTO, Norman (VC)		V,						
BAKER, Rosalyn H.		/						
KOKUBUN, Russell S.					V			
TAKAMINE, Dwight Y.					V			
TANIGUCHI, Brian T.								
SLOM, Sam	or a more than the second s			in province and the second	an and the state of the state o			
		Ann and announcements						
	· · · · · · · · · · · · · · · · · · ·							
TOTAL		2			Z			
Recommendation:								
Chair's or Designee's Signature: N Sakomy								
Distribution: Original Yellow Pink Goldenrod   File with Committee Report Clerk's Office Drafting Agency Committee File Copy								

# \*Only one measure per Record of Votes

#### The Senate Twenty-Fifth Legislature State of Hawaii

### Record of Votes Committee on Education and Housing EDH

Bill / Resolution No.:*	Committee EDT/HR	and the second	WAM Dat	te: 2-13-	09		
The committee is reconsidering its previous decision on this measure.							
The Recommendation is:							
Pass, unamended Pass, with amendments Hold Recommit 2312 2311 2310 2313							
Members		Aye	Aye (WR)	Nay	Excused		
SAKAMOTO, Norman (C)		$\sim$					
KIDANI, Michelle N. (VC)		$\nu$					
CHUN OAKLAND, Suzanne	ni ducădă a recentrativa contre i come	V			and the second		
GALUTERIA, Brickwood		$\mathcal{V}$					
TSUTSUI, Shan S.							
HEMMINGS, Fred							
		11			5		
TOTAL		4					
Recommendation:							
Chair's or Designee's Signature: Muchille N. Kilini							
Distribution: Original Yellow Pink Goldenrod   File with Committee Report Clerk's Office Drafting Agency Committee File Copy							

## \*Only one measure per Record of Votes