

The Law of Green Buildings in Hawai‘i: Is the Goal of Energy Efficiency Achievable?

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I. INTRODUCTION

The angular truss framework and modern appearance of the Hawai'i Gateway Energy Center ("HGEC") appears as a futuristic anomaly on the ancient and stark lava terrain of Kailua-Kona on the island of Hawai'i.¹ Yet, the HGEC, completed in January 2005,² represents the future of the state not because of its dramatic architecture, but because of its relationship with the age-old elements surrounding the building. In a very dry environment, the building manages to satisfy seventy percent of its total water demand through the collection of condensation.³ The building's footprint preserves ninety percent of the surrounding 6.50 acres of terrain,⁴ and over the last six years, produced more electricity by collecting solar energy than it consumed.⁵

Careful planning led to the HGEC's sustainability achievements. When design commenced in 2003, the creator of the HGEC, the Natural Energy Laboratory of Hawai'i Authority ("NELHA"),⁶ targeted and implemented the necessary water and solar design measures to achieve the highest-level certification by the United States Green Building Council's ("USGBC") Leadership in Energy and Environmental Design ("LEED") program.⁷ Developed in 2000, the voluntary LEED rating system measures several key areas of a building's sustainability and efficiency performance.⁸ Based on a 100-point scale, LEED consists of four certification levels: Certified, Silver, Gold, and Platinum.⁹ In the past

¹ *Overview*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://leedcasestudies.usgbc.org/overview.cfm?ProjectID=592>.

² *Id.*

³ *Id.*

⁴ *Site Description*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://leedcasestudies.usgbc.org/site.cfm?ProjectID=592>.

⁵ *Energy*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://leedcasestudies.usgbc.org/energy.cfm?ProjectID=592>.

⁶ *Process*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://leedcasestudies.usgbc.org/process.cfm?ProjectID=592>.

⁷ *Id.*

⁸ *USGBC: What LEED Is*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988>.

⁹ *USGBC: How to Achieve Certification*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1991>.

twelve years, buildings in Hawai‘i have attained LEED ratings in small but increasing numbers, because the state and county governments enacted legislation to encourage and even to require it beginning in 2006.¹⁰

This paper will explore the achievements of Hawaii’s statewide efforts to reduce its energy consumption through the encouragement of green building methods through legal requirements. This exploration will demonstrate that Hawai‘i is a model state for implementing energy efficiency measures.

First, this paper will provide an overview of excessive energy consumption by buildings in the United States (“U.S.”) problem. The paper will then discuss measures taken by the U.S. federal government to encourage the reduction of energy usage, including actions encouraging the creation of green buildings by state and local governments. This section will be followed by a summary of Hawaii’s recent history with energy conservation issues. The paper will then examine examples of states that have enacted legislation to improve energy sufficiency by state facilities and agencies. Through the process of enacting energy efficient legislation, these states made themselves national leaders in combating the energy consumption problem. The first section will conclude with a review of Hawaii’s recent state initiatives for encouraging green building.

In the second section, this paper will analyze the state legislation of Hawai‘i, Washington, and Connecticut. Washington created the first green building mandate, and Connecticut took an alternative approach to green building legislation. Due to similarities and differences of these two states’ legislation as compared with Hawaii’s laws, this paper will examine the comparative strengths and weaknesses of each state’s legislation.

Finally, this paper will recommend that Hawai‘i state agencies continue to work within the framework of its current green building laws, and that lawmakers keep an eye on passing laws that require higher LEED certification to meet or surpass their counterparts in other parts of the U.S. This recommendation will allow Hawai‘i to more easily satisfy its energy efficiency goals, and join other state leaders in battling climate change.

II. LEED EMERGES TO CURB EXCESSIVE BUILDING ENERGY CONSUMPTION

Green building legislation arose when the world became aware of climate change, much of which was attributed to excessive energy consumption by buildings. As a reaction, in the first decade of the 21st century, the U.S. federal and state governments took actions to cut down on the amount of energy spent by buildings by improving energy efficiency. This section will review these governmental actions, which on the federal level included tax incentives, funding for state energy

¹⁰ 2006 Haw. Sess. Laws 269,
http://www.capitol.hawaii.gov/session2006/Bills/HB2175_.htm.

efficiency projects, and the establishment of efficiency target levels for federal buildings. This section will also discuss the LEED rating system, which the states turned to and utilized when following federal actions in creating their own green building legislation.

A. *Federal and State Governments Act on Climate Change by Regulating Building Energy Consumption*

Energy consumption by buildings is a global issue. In 2008, the International Energy Agency found that carbon dioxide emissions from buildings was a problem throughout the world, estimating that buildings devoured over forty percent of the world's total primary energy consumption, and were responsible for twenty-four percent of global carbon dioxide emissions.¹¹ Buildings are thus a targetable source of energy use and pollution.

The world energy consumption problem is led by the United States, where buildings consume seventy-two percent of the national energy usage rate.¹² This percentage is predicted to rise to seventy-five percent by 2025.¹³ In addition, the energy used by U.S. buildings represents 38.9 percent of U.S. primary energy use, which includes fuel input for production.¹⁴ Buildings use energy largely obtained through the burning of fossil fuels, which results in the release of enormous amounts of greenhouse gases and other pollutants.¹⁵ In 2008, the U.S. Department of Energy found that 38.9 percent of the total carbon dioxide emissions in the U.S. come from buildings, with 20.8 percent coming from the residential sector and 18 percent coming from the commercial sector.¹⁶ The U.S. Department of Education estimated that buildings in the U.S. emitted 630 million tons of greenhouse gases in 2006, which was more than any other country except China.¹⁷ Both the federal government and

¹¹ *Id.*

¹² Douglas A. Codiga, *The Greening of Hawai'i Building & Construction Law*, 14 HAWAII B. J. 4, 4 (2010) (citing United States Green Building Council, *Green Building Facts* (citing U.S. Energy Information Administration, *Assumptions to the Annual Energy Outlook* (2008))).

¹³ U.S. Environmental Protection Agency, *Buildings and Their Impact on the Environment: A Statistical Summary*, EPA.GOV (April 22, 2009), <http://www.epa.gov/greenbuilding/pubs/gbstats.pdf>.

¹⁴ USGBC: *Green Building By the Numbers*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://www.usgbc.org/ShowFile.aspx?DocumentID=3340> (citing ENVIRONMENTAL INFORMATION ADMINISTRATION, DOE/EIA-0383, EIA ANNUAL ENERGY OUTLOOK (2008)).

¹⁵ *Buildings and Their Impact on the Environment: A Statistical Summary*, *supra* note 13 (citing U.S. DEPARTMENT OF ENERGY, DOE/EIA-0573, EMISSIONS OF GREENHOUSE GASES IN THE U.S. (2007)).

¹⁶ *Id.*

¹⁷ J. Cullen Howe, *Overview of Green Buildings*, in THE LAW OF GREEN

many state governments responded to the U.S. buildings' high energy consumption by enacting legislation and putting forth executive orders.

At the federal level, the U.S. Congress ("Congress"), although initially reluctant to act on climate change, responded to the U.S. buildings energy consumption problem through the passage of various bills. First, Congress enacted the Energy Policy Act of 2005 on January 4, 2005.¹⁸ This Act addressed energy consumption by providing tax benefits for owners of commercial and residential buildings who improved their building's energy efficiency.¹⁹ Such energy improvements for commercial buildings can qualify for tax deductions of close to two dollars per square foot.²⁰

Second, Congress passed the Energy Independence and Security Act of 2007 on December 19, 2007.²¹ This Act created the Office of High-Performance Green Buildings ("OHPGB") in the U.S. General Services Administration.²² The OHPGB establishes green building standards for new federal buildings.²³ This Act also set ambitious goals, one of which requires the one hundred percent reduction of energy consumption by new or remodeled federal buildings by 2030 and another requiring the zero-net energy usage by all commercial buildings by 2050.²⁴

Third, and most recently, Congress passed the American Recovery and Reinvestment Act of 2009 ("ARRA") on February 17, 2009.²⁵ Among the green building provisions in this Act, 4.5 billion dollars were made available to convert federal facilities to high-performance green buildings.²⁶ Of particular relevance to this paper, ARRA also provided funding for energy efficiency programs on state and local levels. Furthermore, 3.2 billion dollars were also made available for the Energy Efficiency and Conservation Block Grant program to distribute federal grants to state and local governments to improve energy use.²⁷ An

BUILDINGS 5 (J. Cullen Howe & Michael B. Gerrard ed., 2010).

¹⁸ Energy Policy Act of 2005, 42 U.S.C. §§ 13201-574 (2005).

¹⁹ *Id.*

²⁰ Walter Mugdan and Gregory Hoffnagle, *Federal Government Initiatives to Promote Green Building and Sustainable Development*, in THE LAW OF GREEN BUILDINGS 39 (J. Cullen Howe & Michael B. Gerrard ed., 2010).

²¹ Energy Independence and Security Act of 2007, H.R. 6, 110th Cong. (2007).

²² Mugdan & Hoffnagle, *supra* note 20, at 39-40.

²³ *Id.* at 40.

²⁴ *Id.* at 39-40.

²⁵ American Recovery and Reinvestment Act of 2009, H.R. 1, 111th Cong. (2009).

²⁶ Mugdan & Hoffnagle, *supra* note 20, at 42.

²⁷ *Id.* at 42.

additional 3.1 billion dollars were made available through the State Energy Program to provide financial support for state renewable energy projects.²⁸ With federal funding from Congress, states are able to better pursue energy efficiency initiatives to combat climate change.

In addition to the legislative branch, the executive branch of the federal government also took action to encourage energy efficiency. Through a series of executive orders, the federal executive branch also declared energy use to be a major concern, and created measures forcing federal agencies to follow guidelines and reduce their energy footprint. On January 24, 2007, President George W. Bush signed Executive Order 13,423 that sets energy consumption reduction goals for federal agencies to meet by 2015, relative to a 2003 baseline.²⁹ Nearly three years later, on October 5, 2009, President Barack Obama signed an executive order directing federal agencies to establish greenhouse gas emissions reduction targets for the year 2020.³⁰ The federal government, through the executive and legislative branches, saw energy consumption as a problem best solved through self-regulation and goal setting.

Some states simultaneously echoed the federal government's actions, enacting legislation designed to meet similar goals. In 2005, Washington State passed the first state green building law,³¹ and other state legislatures soon followed suit including Connecticut and Hawai'i.³² Additionally, in the same fashion as the U.S. Presidents, state governors issued Executive Orders directing agencies to comply with energy efficiency standards.³³ In the U.S. governmental system, federal laws have limited reach over states. It is important that state governments sign on to combat climate change in the same fashion as the federal government, in order to truly address the problem. The states turned to certain standards in creating their green building laws, most significantly LEED.

B. The United States Green Building Council Creates LEED as a Private Certification System of Building Energy Consumption

To provide guideposts for creating energy efficient buildings, state governments have largely relied upon the LEED standard. The standard is

²⁸ *Id.*

²⁹ *Id.* at 48.

³⁰ *Id.* For the full text of the executive order see Exec. Order No. 13,514, 74 Fed. Reg. 52,117 (Oct. 8, 2009), http://www.whitehouse.gov/assets/documents/2009fedleader_eo_rel.pdf.

³¹ WASH. REV. CODE § 39.35D (2012).

³² See H.B. 2175, CD1, 23rd Leg., Reg. Sess. (Haw. 2006), http://www.capitol.hawaii.gov/session2006/bills/HB2175_cd1_.htm.

³³ See USGBC: Public Policies Adopting or Referencing LEED, USGBC: U.S. GREEN BUILDING COUNCIL, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1852>.

organized and in wide use, but because the standard is created by a non-profit organization, questions arise about the propriety of its role in legislation. What follows is an overview of the private certification system, the controversy surrounding the system, whether LEED is appropriate for states, and an overview of the LEED system in Hawai‘i.

1. LEED as a Private Certification System

LEED is a private certification system that measures energy efficiency based on a building’s design, construction, operation, and maintenance.³⁴ It is a 100-point system based on five different credit categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality.³⁵ These criteria reflect not only energy efficiency, but also environmental and health problems associated with buildings. Based on the points a project receives in the different credit categories, it can receive a rating of Certified, Silver, Gold, or Platinum.³⁶ As discussed *infra*, the Silver level is often the LEED rating referenced in green building legislation. The LEED program itself is important because it recognizes how buildings can be customized to limit their environmental impact.

In 1999, a private non-profit organization, U.S. Green Building Council (“USGBC”), introduced the LEED criteria.³⁷ The organization was started in 1993 by David Gottfried, Mike Italiano, and S. Richard Fedrizzi.³⁸ However, it was John Picard, one of the organization’s members who brought credibility to the organization. In 1993, he helped to create the Clinton Administration’s Greening of the White House initiative, which has saved the White House approximately three hundred thousand dollars annually in energy costs.³⁹ Without Picard’s involvement in the Greening of the White House initiative, the LEED program may not have received the attention that it did.

Since its inception in 1999, the LEED program has gone through multiple versions. The first system, LEED Version 1.0, mainly involved

³⁴ *Id.*

³⁵ *Id.* at 16. The LEED system formerly had six main credit categories. The “Innovation and Design” category became a “bonus” credit category with the creation of the LEED 2009 rating system. *See LEED Rating Systems*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://new.usgbc.org/leed/rating-systems>.

³⁶ For more information about the rating point system, *see USGBC: Receive the certification decision*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://www.usgbc.org/leed/certification/certify>.

³⁷ *Id.*

³⁸ Geoffrey M. White, Joshua Nichols, & Jeff York, *Green Building Rating Systems and Green Leases*, in *THE LAW OF GREEN BUILDINGS* 16 (J. Cullen Howe & Michael B. Gerrard ed., 2010).

³⁹ *Id.* at 17.

new construction.⁴⁰ Subsequent iterations of LEED focused on new commercial construction and major renovations: LEED v.2.0 (known as LEED-NC), LEED-NC v2.1, and LEED-NC v.2.2.⁴¹ LEED v.3.0 was implemented in April 2009.⁴² This version is broader, with different sets of criteria with rating systems for new construction, existing buildings, core and shell,⁴³ and commercial interiors.⁴⁴

There is additionally a latest iteration of the LEED standards in the works. It is dubbed the LEED 2012 and the public comment period for the standard began on March 1, 2012. The USGBC intended for LEED 2012 to be balloted in June 2012 and launched in November 2012.⁴⁵ However, in response to “concerns raised by members, core LEED users and stakeholders and in an effort to provide the marketplace a view of the full LEED program experience prior to ballot,” the USGBC announced on June 4, 2012 that it will delay the ballot on LEED 2012 until June 1, 2013, and rename the new standard LEED v4.⁴⁶

Although it is the USGBC that administers the development and the ongoing improvement of the LEED rating system,⁴⁷ the project certificate is administered by a different organization, the Green Certification Institute (“GBCI”). GBCI The USGBC gained credibility shortly after when one of their its members, John Picard, helped to create the “Greening of the White House” initiatives used by the Clinton Administration, which has saved the White House approximately \$300,000 annually in energy costs.⁴⁸ In 1999, the USGBC introduced the

⁴⁰ White, Nichols, & York, *supra* note 38, at 17.

⁴¹ *Id.*

⁴² *Id.*

⁴³ Core and shell projects are those

where the developer controls the design and construction of the entire core and shell base building (e.g., mechanical, electrical, plumbing, and fire protection systems) but has no control over the design and construction of the tenant fit-out. Projects could include a commercial or medical office building, retail center, warehouse, or lab facility.

USGBC: Core and Shell, USGBC: U.S. GREEN BUILDING COUNCIL, <http://www.usgbc.org/leed/rating-systems/core-shell>.

⁴⁴ White, Nichols, & York, *supra* note 38, at 17.

⁴⁵ *USGBC: LEED 2012 Development*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=2360>.

⁴⁶ *USGBC Announces Changes to LEED 2012*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://new.usgbc.org/articles/usgbc-announces-changes-leed-2012>.

⁴⁷ *USGBC: How to Achieve Certification*, *supra* note 9.

LEED criteria.⁴⁹ LEED measures energy efficiency based on a building's design, construction, operation, and maintenance.⁵⁰

LEED is a 100-point system based on five different credit categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality.⁵¹

The Green Building Certification Institute ("GBCI") administers LEED certification for all commercial and institutional projects registered under any LEED Rating System,⁵² and also develops and administers LEED professional credentialing.⁵³ Although these credentials are not necessary to seek LEED certification, they provide technical knowledge, expertise, and credibility to those credentialed.⁵⁴

The first step in pursuing a LEED project is project registration with GBCI, which "serves as a declaration of intent to certify a building or neighborhood development under the LEED Green Building Rating Systems."⁵⁵ After registration, the project team prepares and submits an application to GBCI, in the process selecting the points in the credit categories it has chosen to pursue and assigning responsibility for attaining the points to certain team members.⁵⁶ The application is reviewed by GBCI, and if the project passes the review, it grants the LEED certification to the project.⁵⁷

⁵² LEED's five credit categories apply to all its certifications. There are currently different subcategory "Ratings Systems," including "New Construction," "Existing Buildings," and "Commercial Interiors," that describe which credit categories apply to that type of construction. See *LEED Rating Systems*, *supra* note 35.

⁵³ LEED professional credentials are split into three categories based on level of expertise: LEED Green Associate, LEED Accredited Professional ("AP"), and LEED Fellow. *About GBCI*, GREEN BUILDING CERTIFICATION INSTITUTE, <http://www.gbci.org/org-nav/about-gbci/about-gbci.aspx>.

⁵⁴ *USGBC: Credentials*, USGBC: U.S. GREEN BUILDING COUNCIL, <http://www.usgbc.org/credentials>.

⁵⁵ *LEED for New Construction: Registering a Project*, GREEN BUILDING CERTIFICATION INSTITUTE, <http://www.gbci.org/main-nav/building-certification/certification-guide/leed-for-new-construction/project-registration/registration.aspx>.

⁵⁶ *LEED for New Construction: Prepare Application for LEED 2009 Projects*, GREEN BUILDING CERTIFICATION INSTITUTE, <http://www.gbci.org/main-nav/building-certification/certification-guide/leed-for-new-construction/prepare-application/v3.aspx>.

⁵⁷ *LEED for New Construction: Application Review*, GREEN BUILDING CERTIFICATION INSTITUTE, <http://www.gbci.org/main-nav/building-certification/certification-guide/leed-for-new-construction/application-review/review.aspx>.

2. Proponents and Opponents of State Use of a Private Certification System

Although used and recognized widely, LEED has proponents and opponents, on issues involving the standard's role in legislation. Some argue that LEED promotes delegation to a non-lawmaking entity and leaves responsibility to well-intentioned, but unqualified personnel.⁵⁸ In a recently published law journal article,⁵⁹ University of Florida Law Professor Michael Allan Wolf analyzed issues related to green building legislation, including the use of a standard, such as LEED, that is modified by a private non-profit organization. Professor Wolf calls this issue the "delegation problem" of relying on a "moving target" (in that the LEED standard is constantly changing) created by a third-party outside both the industry and the government..⁶⁰

Professor Wolf argues that,

the incorporation of LEED . . . raises not only the usual concerns associated with industry 'capture,' but also, in those localities that require compliance with the 'current version' of LEED or other standards, the particularly troublesome possibility that the substance of this privately generated law might change without official legislative action."⁶¹

LEED is regularly updated and changed. As stated *supra*, the standard has undergone two revisions and the USGBC is in the process of creating a third version. Professor Wolf contends that, as the Hawai'i and other state laws are currently written, they reference a standard that will change without legislative review.⁶² Professor Wolf continues, "[l]ocal (and state) governments appear to stand on firmer ground when the standard

⁵⁸ Michael A. Wolf, *A Yellow Light for 'Green Zoning': Some Words of Caution About Incorporating Green Building Standards into Local Land Use Law* 43 URB. LAW. 949 (2012), available at <http://ssrn.com/abstract=2001059>.

⁵⁹ *Id.*

⁶⁰ *Id.* The full list of potential problems in Professor Wolf's article include: (1) the "delegation problem" of relying on LEED standards, what Professor Wolf deems a third-party "moving target," (2) the "compatibility problem" of LEED standards and planning practices, (3) the "expertise problem" of local officials administering the green building standards, (4) the "eco-political problem" of whether local officials should be involved in ecological debate, (5) the "laboratory problem" of whether different localities should enact their own green building laws, or if state standards are more appropriate, and (6) the "philosophical problem" of the building and architectural industry having a role in establishing green building standards. *Id.*

⁶¹ *Id.* at 957.

⁶² *Id.*

generated by the outside entity is fixed at a certain point in time and not subject to change.”⁶³

Professor Wolf says that a good approach for combating this delegation problem is to organize a governmental task force, consisting of public officials and private members, to analyze and recommend the legislative adoption of the best elements of the LEED standard.⁶⁴ This governmental involvement and element selection would make the LEED standard the government’s creation and not that of the third party. Otherwise, Professor Wolf warns, that giving a seal of approval to LEED, or taking it “whole cloth into law ... can be lazy[,] or foolish, or both.”⁶⁵

Proponents of the LEED standard that are involved in green building design and scholarship, disagree with Professor Wolf’s contentions that LEED is a problematic “moving target.”⁶⁶ Glenn Yokotake, President of the USGBC Hawai‘i Chapter, says that for architects, there are already several rating systems creating a network of targets; and that certain types of buildings, such as schools and hospitals, “have their own rating systems like the Collaborative for High Performance Schools, Living Building Challenge, Comprehensive Assessment System for Built Environment Efficiency, Green Guide for Healthcare,” and that “they do not usually conflict” with LEED.⁶⁷ This contention may suggest that, although LEED may change, the reality for designers is that they need to work with several systems already, and are familiar with the challenge. In other words, it is not so much a problem as it is part of the job.

These proponents also acknowledge LEED’s ability to change, but point to the benefits derived from that ability and from the democratic process involved in the standard’s alteration. Mr. Yokotake agrees that the LEED standard is “ever-evolving,” but says that it is also “consensus-

⁶³ *Id.* at 958. Similarly, University of Hawai‘i Law Professor David Callies contends that it is an illegal delegation of legislative power to a private entity if it is something that will change in the future. He believes that a third-party standard is acceptable, as long as the particular version referenced in a law has gained the approval of legislators. To Professor Callies, LEED, as used in Hawai‘i, qualifies as an illegal third-party delegation because the standard has undergone revision by its own members subsequent to the passage of the law, yet is still referenced. Interview with David L. Callies, Benjamin E. Kudo Professor of Law, University of Hawai‘i at Mānoa, William S. Richardson School of Law (Apr. 10, 2012).

⁶⁴ Telephone Interview with Michael Allan Wolf, Richard E. Nelson Chair in Local Government Law, University of Florida Levin College of Law (Apr. 6, 2012).

⁶⁵ *Id.* at 57.

⁶⁶ Wolf, *supra* note 58 at 949.

⁶⁷ Email correspondence with Glenn Yokotake, President, U.S. Green Building Council, Hawai‘i Chapter (Feb. 20, 2013).

based” and that the public can comment.⁶⁸ While it may not be a legislative creature, it involves the public in a vetting process. Mr. Yokotake asserts that “[i]t is necessary for green building rating systems to evolve to improve and strive for the built environment to co-exist with the earth’s ecology.”⁶⁹ Similarly, Brent Tokita, Legislative Advocacy Chair for the USGBC Hawai‘i Chapter, argues that, while “LEED is a moving target, its unavoidable. Building codes change too. Sustainable design is always improving.”⁷⁰ The evolving nature of the LEED standard is what makes it useful, in the proponents’ view.

Legal scholars also recognize issues involved with third-party-created green building standards, and propose solutions. Columbia Law School Professor and Director at the Columbia Center for Climate Change Law, Michael B. Gerrard, contends that for a law to refer to only one version of a green building rating standard would be “a problem.”⁷¹ He and others at the Center have drafted a model municipal green building code designed “with the ability to move with the target.”⁷² According to Professor Gerrard, the model code allows a municipality to adopt provisions “on a case-by-case basis.”⁷³ As opposed to the task force that Professor Wolf promotes, Professor Gerrard clarifies that he is “not calling on each municipality to convene a task force to custom-make a green building code; few municipalities would have the capacity to do that.”⁷⁴ Professor Gerrard asserts that:

a municipality should adopt a particular version of a particular LEED code (with whatever specific revisions it believes are appropriate for its own circumstances), and, if a new version comes out, the municipality should consider adopting that one. The key point is that the binding code should not automatically be what the USGBC (or another entity) later adopts. It's important that the municipality exercises its own decision in adopting new versions; otherwise it probably is impermissible delegation.⁷⁵

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ Interview with Brent Tokita, Chair, Legislative Advocacy Committee, U.S. Green Building Council, Hawai‘i Chapter (Mar. 22, 2012).

⁷¹ Telephone Interview with Michael B. Gerrard, Andrew Sabin Professor of Professional Practice, Columbia Law School (Mar. 5, 2012).

⁷² *Id.*

⁷³ *Id.*

⁷⁴ Email correspondence with Michael B. Gerrard, Andrew Sabin Professor of Professional Practice, Columbia Law School (Feb. 18, 2013).

⁷⁵ *Id.*

As will be discussed *infra*, Hawaii's green building law attempts to address the potential problems that emerge from certain states' inclusion of a singular energy efficiency standard such as LEED in the language of their laws. The legislation does not limit its energy efficiency rating system references to LEED, and contemplates equivalent standards, such as Green Globes,⁷⁶ a green building standard out of Canada.⁷⁷ However, according to Professor Wolf, including these other standards would not alter the effect of the statute. From Professor Wolf's perspective, the law is still delegating to a third party, just one with a different name.⁷⁸

The "delegation problem" is an interesting issue, but it is one that does not seem to trouble those who utilize the LEED standards the most, because those architects and designers know and continually work with the existing system. There is no incentive for them to change the system, but should they feel the need, they are also in the position to alter the standard if it proves unsatisfactory. It seems to be those outside of the design and building industry who have concerns about standards seemingly out of their and others' control. For the purposes of Hawaii's green building success, that is, the physical creation of energy efficient buildings, the most important elements of this argument is that the standard works, and it has not been challenged on the basis of the alleged delegation. For example, Hermina Morita, Chair of Hawai'i Public Utilities Commission ("HPUC"), said that she was not familiar with the delegation issue, but understood it.⁷⁹ Ms. Morita stated that it was a "matter of having agreed upon technical manuals or references. As long as they are consistent, it's okay. Have one set of standards... apples to apples."⁸⁰

Despite its potential flaws, the LEED standards have become more popular and widely used overall. According to Professor Gerrard, LEED has "widespread acceptance in the building community."⁸¹ This acceptance suggests that because the standard has become established, the onus is on governments to adapt to the issues or else confront a lack of green building standard. Hermina Morita says that LEED has input from

⁷⁶ HAW. REV. STAT. § 196-9 (2012).

⁷⁷ For a description of the Green Globes rating system, see *About Green Globes*, GREEN GLOBES, <http://www.greenglobes.com/about.asp>.

⁷⁸ Telephone Interview with Michael Allan Wolf, *supra* note 64.

⁷⁹ Telephone interview with Hermina M. Morita, Chair, Public Utilities Commission, State of Hawai'i (Apr. 13, 2012). Chair Morita is a former State Representative who helped introduce the green building mandate.

⁸⁰ *Id.*

⁸¹ Telephone Interview with Michael B. Gerrard, *supra* note 71.

companies and the government that “make it legitimate.”⁸² Echoing Professor Gerrard’s contention, the standard itself has taken hold; its placement in legislation in itself is not necessarily misplaced.

3. For States, Is LEED Tough Enough?

Some observers of green building mandates do not criticize the existence of a third-party standard, but instead argue that the LEED Silver standard, which is the most widely used LEED standard, is not demanding enough.⁸³ These critics, such as Walter Simpson of the Association for the Advancement of Sustainability in Higher Education, argue that the freedom given to certification applicants in targeting certain LEED credit points is a problem affecting the true efficiency of projects.⁸⁴ This is because the LEED checklist can be “cherry-picked to find the cheapest, easiest ways to rack up enough points to achieve a LEED rating.”⁸⁵ Mr. Simpson proposes that planners should design projects with a target for a Gold or Platinum certification, and create a design that maximizes certain LEED point areas, such as Energy and Atmosphere.⁸⁶ If a designer chooses to emphasize achievement in those point areas, Mr. Simpson contends that the project will be a more legitimate effort at achieving sustainability.⁸⁷

Mr. Tokita does not view the attainment of certain levels of certification in the same manner as Mr. Simpson. Mr. Tokita refers to the distance between the LEED Silver and LEED Gold standards as a “quantum leap,” and he also advocates for a “more holistic approach, focusing on water use and electricity.”⁸⁸ To Mr. Tokita, the latter two uses have a greater impact on Hawaii’s particular environmental issues, and they should take precedence over building practices that do not really affect the building’s efficiency but count towards achieving a particular LEED certification level. Improved water and electricity use should benefit the owner, and the state, regardless of the metallurgical rating.

⁸² Telephone interview with Hermina M. Morita, *supra* note 79.

⁸³ Walter Simpson, *New Construction and Green Building Design*, ASSOCIATION FOR THE ADVANCEMENT OF SUSTAINABILITY IN HIGHER EDUCATION (May 27, 2009), <http://www.aashe.org/blog/new-construction-and-green-building-design>.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.* The EA credit areas are: EA Credit 1 – Optimize Energy Performance, EA Credit 2 – On-Site Renewable Energy, and EA Credit 6 – Green Power. *See* U.S. GREEN BUILDING COUNSEL: LEED FOR NEW CONSTRUCTION & MAJOR RENOVATIONS (Oct. 2005), <http://www.usgbc.org/Docs/Archive/General/Docs1095.pdf>.

⁸⁷ *Id.*

⁸⁸ Interview with Brent Tokita, *supra* note 70.

Gail Suzuki-Jones, Energy Analyst for the Hawai‘i Department of Business, Economic Development, and Tourism (“DBEDT”), states that whether or not the difference between LEED Silver and LEED Gold is a quantum leap “depends on the project.”⁸⁹ Others seem to agree with Ms. Suzuki-Jones. Carlton Saito, Aide to State Senator Mike Gabbard, stated that in 2011, the Hawai‘i State Capitol building was nominated to enter an energy efficiency contest with other state buildings across the U.S.⁹⁰ The Hawai‘i building was the only capitol building amongst over two hundred entering the competition.⁹¹ Mr. Saito said that the winning structure was a parking garage that “only requires lighting, they do not have air conditioning or computers.”⁹² In reality, reaching certain LEED rating points may be easier with some projects than others, according to the LEED framework. With simpler projects with limited foreseeable human involvement, requirements to achieve ratings may be low. However, if humans are projected to live or work in a certain building, it could prove difficult to achieve rating points after elements such as air conditioning are included. Based on this example, it appears true that the level of LEED certification a project can attempt to achieve depends on the nature of the project.

4. Hawai‘i and Other States Adopt LEED

Shortly after USGBC created LEED, certain states incorporated the standard into their laws as green building mandates, beginning with Washington State. Other states, including Hawai‘i and Connecticut, followed its example and created green building laws of their own.⁹³ These three states are considered to be among the leaders of energy efficiency legislation in the U.S.; however, their laws regarding green buildings differ in varying degrees.⁹⁴ These three states chose different language and approaches in their laws, yet are connected in their commitment to pursuing energy conservation; as such, this paper will review the legislative acts of those states and incorporate them into later analysis of the effect the laws have on the construction of energy efficiency buildings.

⁸⁹ Interview with Gail Suzuki-Jones, Strategic Industries Division, Department of Business, Economic Development, and Tourism, State of Hawai‘i (Apr. 18, 2012).

⁹⁰ Interview with Carlton Saito, Committee Clerk, Office of Hawai‘i State Senator Mike Gabbard (Apr. 13, 2012).

⁹¹ *Id.*

⁹² *Id.*

⁹³ See H.B. 2175, *supra* note 32; 2007 Conn. Acts 1007 (Reg. Sess.), <http://www.cga.ct.gov/2007/act/pa/2007pa-00242-r00hb-07432-pa.htm>.

⁹⁴ In 2012, Connecticut ranked #6, Washington #8, and Hawai‘i #18 in energy efficiency among the states. American Council for an Energy-Efficient Economy, The State Energy Efficiency Scorecard, <http://aceee.org/sector/state-policy/scorecard>.

Washington State passed the first state green building law in 2005.⁹⁵ Public buildings in Washington are required to meet LEED Silver standards, in a broad mandate codified in the state statutes. The Revised Code of Washington (“RCW”) § 39.35D.030 provides:

All major facility projects of public agencies receiving any funding in a state capital budget, or projects financed through a financing contract as defined in RCW 39.94.020, must be designed, constructed, and certified to at least the LEED silver standard. This subsection applies to major facility projects that have not entered the design phase prior to July 24, 2005, and to the extent appropriate LEED silver standards exist for that type of building or facility.⁹⁶

The Code mentions only the LEED standard. The language of the code appears to be very strong and is broad in scope, mandating that “all” public “major facility projects” that receive “any funding” meet “at least” the LEED Silver standard.⁹⁷ This language potentially encompasses any new state building project.

⁹⁵ WASH. REV. CODE § 39.35D (2012), *supra* note 31. This statute provides in part:

§ 39.35D.030

Standards for major facility projects — Annual reports.

(1) All major facility projects of public agencies receiving any funding in a state capital budget, or projects financed through a financing contract as defined in RCW 39.94.020, must be designed, constructed, and certified to at least the LEED silver standard. This subsection applies to major facility projects that have not entered the design phase prior to July 24, 2005, and to the extent appropriate LEED silver standards exist for that type of building or facility.

(2) All major facility projects of any entity other than a public agency or public school district receiving any funding in a state capital budget must be designed, constructed, and certified to at least the LEED silver standard. This subsection applies to major facility projects that have not entered the grant application process prior to July 24, 2005, and to the extent appropriate LEED silver standards exist for that type of building or facility.

(3)(a) Public agencies, under this section, shall monitor and document ongoing operating savings resulting from major facility projects designed, constructed, and certified as required under this section.

(b) Public agencies, under this section, shall report annually to the department on major facility projects and operating savings.

Id.

⁹⁶ *Id.* § 39.35D.030(1) (emphasis added).

⁹⁷ *Id.* § 39.35D (2012).

However, there exists some mitigating language further in the statute. Buildings are directed to follow LEED standards “to the extent ... appropriate” criteria exist for the type of facility.⁹⁸ LEED design standards potentially extend to the private sector in RCW § 39.35D.030, subsection 2:

All major facility projects of any entity other than a public agency or public school district receiving any funding in a state capital budget must be designed, constructed, and certified to at least the LEED silver standard. This subsection applies to major facility projects that have not entered the grant application process prior to July 24, 2005, and to the extent appropriate LEED silver standards exist for that type of building or facility.⁹⁹

The language in this subsection of the Code mirrors that of the first subsection. The scope of the act seems broad: “all major facility projects of any entity . . . receiving any funding . . . must” meet or exceed the LEED Silver standard.¹⁰⁰ Like the former subsection, the language “to the extent” is again included. Notably, no agency is tasked with promulgating the regulations.¹⁰¹ The agencies that are responsible for following the law monitor themselves and report to the Department of Enterprise Services.¹⁰²

(3)(a) Public agencies, under this section, shall monitor and document ongoing operating savings resulting from major facility projects designed, constructed, and certified as required under this section.

(b) Public agencies, under this section, shall report annually to the department on major facility projects and operating savings.¹⁰³

Like Washington State, Connecticut consistently ranks among the top ten states for its energy efficiency.¹⁰⁴ On May 31, 2007, Connecticut’s

⁹⁸ *Id.* § 39.35D.030 (2012).

⁹⁹ *Id.* § 39.35D.030(2) (2012) (emphasis added).

¹⁰⁰ *Id.* (emphasis added).

¹⁰¹ Washington officials suggest that the Department of Enterprise Services “has taken on that role.” Email correspondence with Stuart J. Simpson, Green Building Advisor, Washington State Department of Enterprise Services (Mar. 19, 2013).

¹⁰² WASH. REV. CODE § 39.35D.030(3), *supra* note 31.

¹⁰³ *Id.* (emphasis added).

¹⁰⁴ *The 2011 State Energy Efficiency Scorecard*, AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY (2011), <http://www.aceee.org/sites/default/files/publications/researchreports/e1115.pdf>.

green building legislation, House Bill 7432, was introduced into the General Assembly by seven sponsoring legislators.¹⁰⁵ Less than a week later, Governor Jodi Rell signed the bill passed as Public Act No. 07-242.¹⁰⁶ The Act provides:

(1) new construction of a state facility . . . shall comply with the regulations adopted pursuant to subsection (b) of this section. The Secretary of the Office of Policy and Management, in consultation with the Commissioner of Public Works, [and the Institute for Sustainable Energy,] shall exempt any facility from complying with said regulations if [said secretary] the Institute for Sustainable Energy finds, in a written analysis, that the cost of such compliance significantly outweighs the benefits.¹⁰⁷

On its face, the Act requires state facility projects of a certain budget to “comply” with regulations adopted pursuant to subsection (b) of the same law. The baseline for newly constructed state facilities is a project with two million dollars of state funding.¹⁰⁸ State facility renovation projects have a two million dollar baseline.¹⁰⁹ The Institute for Sustainable Energy, an institute located at the Eastern Connecticut State University,¹¹⁰ is responsible for a written cost-benefit analysis of state projects.¹¹¹ If the costs of compliance outweigh the benefits, a building is exempt from the regulations.¹¹² A review of Public Act 07-242, section 10, subsection (b) reveals the regulations required for compliance by the eligible buildings, and who will create those regulations:

Not later than January 1, 2007, the Secretary of the Office of Policy and Management, in consultation with the Commissioner of Public Works, the Commissioner of

¹⁰⁵ *Bill Status*, STATE OF CONNECTICUT GENERAL ASSEMBLY (2007), http://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&bill_num=7432&which_year=2007&SUBMIT1.x=9&SUBMIT1.y=12&SUBMIT1=Normal.

¹⁰⁶ 2007 Conn. Acts 1007 (Reg. Sess.), <http://www.cga.ct.gov/2007/act/pa/2007pa-00242-r00hb-07432-pa.htm>. In regards to green buildings, this statute has two relevant sections: Section 10, which pertains to the public sector, and Section 78, which involved the state building code. *Id.*

¹⁰⁷ 2007 Conn. Acts 1012 (Reg. Sess.) (emphasis added), <http://www.cga.ct.gov/2007/act/pa/2007pa-00242-r00hb-07432-pa.htm>.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Home*, THE INSTITUTE FOR SUSTAINABLE ENERGY, http://www.easternct.edu/sustainenergy/about_us/welcome.html.

¹¹¹ Conn. Acts 1012, *supra* note 107.

¹¹² *Id.*

Environmental Protection and the Commissioner of Public Safety, shall adopt regulations, in accordance with the provisions of chapter 54, to adopt building construction standards that are consistent with or exceed the silver building rating of the Leadership in Energy and Environmental Design's rating system . . . ¹¹³

According to the statute, the regulations should create standards that “meet or exceed the LEED Silver standard” or equivalent.¹¹⁴ The Secretary of the Office of Policy and Management “shall” adopt regulations.¹¹⁵ Notably, these regulations should include “energy standards that exceed those set forth in the 2004 edition of the American Society of Heating, Ventilating and Air Conditioning Engineers (“ASHRAE”) Standard 90.1 by no less than twenty percent.”¹¹⁶ The Secretary may then update regulations as “deem[ed] necessary.”¹¹⁷

A later section of Public Act 07-242, Section 78, extends energy efficiency standards to the private sector and residential buildings. The legislation provides:

On and after January 1, 2008, the State Building Inspector and the Codes and Standards Committee shall revise the State Building Code to require that buildings and building elements, including residential, be designed to provide optimum cost-effective energy efficiency over the useful life of the building. Such revision shall meet the American Society of Heating, Refrigerating and Air Conditioning Engineers Standard 90.¹¹⁸

This part of the legislation differs greatly from the Washington law. Unlike RCW § 39.35D.030, section 78 does not mention the LEED standard; rather, the ASHRAE Standard 90 is the requirement.¹¹⁹ This may not be a notable difference. As one architect describes, “ASHRAE is not a rating system. ASHRAE is an engineering standard which is often referenced within green building rating systems when it comes to

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ Conn. Agencies Regs. § 16a-38k-1 - 16a-38k-9 (2005), available at http://www.ct.gov/deep/lib/deep/energy/buildingstandards/ct_regulations_16a-38k-1_thru_9.pdf.

¹¹⁶ Conn. Acts 1007, *supra* note 106.

¹¹⁷ *Id.*

¹¹⁸ 2007 Conn. Acts 1071 (Reg. Sess.) (emphasis added), <http://www.cga.ct.gov/2007/act/pa/2007pa-00242-r00hb-07432-pa.htm>.

¹¹⁹ *Id.*

ventilation, indoor air quality, and other HVAC issue.”¹²⁰ Moreover, another portion of section 78, pertaining to a state building code, mirrors the rest of the law and focuses on a LEED standard:

Notwithstanding subsection (a) of this section, the State Building Inspector and the Codes and Standards Committee shall revise the State Building Code to require that any (1) building, except a residential building with no more than four units shall be built or renovated using building construction standards consistent with or exceeding the silver building rating of the Leadership in Energy and Environmental Design's rating system for new commercial construction and major renovation projects . . .¹²¹

Again, the legislature set a five million dollar baseline for new construction and two million dollars for renovation projects.¹²² Also, the Institute for Sustainable Energy, as in subsection (a), wields significant power in determining what buildings qualify for exemption.¹²³

In July 2011, Senate Bill No. 1243 was enacted as Public Act No. 11-80.¹²⁴ It established the Department of Energy and Environmental Protection and transferred the responsibilities of the Office of Policy and Management to the newly created agency.¹²⁵

Connecticut passed on creating a broad public building mandate like Washington, opting instead for a complicated green building law that requires LEED for residential homes. Connecticut also mandates the creation and subsequent adoption of regulations that draw upon a hybrid of LEED and ASHRAE standards. Hawai'i utilizes a green building law framework that differs greatly from Connecticut's, and more closely follows the Washington framework.

III. HAWAII'S GREEN BUILDING LAW FRAMEWORK

Hawaii's green building legislation and subsequent efforts towards energy efficiency could not have occurred without a convergence of political pressure and support. When introduced in 2006, House Bill 2175 (Act 96) enjoyed an enormous amount of support from both sides of the

¹²⁰ Email correspondence with Glenn Yokotake, *supra* note 63.

¹²¹ Conn. Acts 1071, *supra* note 118.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ 2011 Conn. Acts 1266 (Reg. Sess.),
<http://www.cga.ct.gov/2011/ACT/PA/2011PA-00080-R00SB-01243-PA.htm>.

¹²⁵ 2011 Conn. Acts 1266 (Reg. Sess.),
<http://www.cga.ct.gov/2011/ACT/PA/2011PA-00080-R00SB-01243-PA.htm>.

Hawai‘i Legislature.¹²⁶ The bill was part of the House Majority Caucus package and had dozens of sponsors.¹²⁷ One of the bill’s introducers, Chair Hermina Morita, said that House Bill 2175 was created to “clean up” a similar act passed in 2002.¹²⁸ In contrast with the earlier bill, there was “political will in the administration” in 2006 to have an effective green building law.¹²⁹ The future success of Acts 96 and 155 will depend upon similar support. As Ms. Morita contends, “enforcement and implementation depends on political will.”¹³⁰

Carilyn Shon of DBEDT described the atmosphere at the time of Act 155’s passage as a confluence of interests pushing the bill forward.¹³¹ Ms. Shon gave as an example the creation of the Hawai‘i Clean Energy Initiative (“HCEI”), which only occurred because of its own group of converging forces: the support of various entities in the State and the U.S. Department of Energy, the growing interest of private investors, the President’s issuing a number of Executive Orders to federal agencies (which in turn impacted the State of Hawai‘i), and the availability of ARRA funding to implement programs.¹³² As Ms. Shon observed, “we cannot do things in isolation.”¹³³ In particular, the HCEI “changed DBEDT and the community in general” by creating an agreement between the State of Hawai‘i and the electric utilities, overseen by the U.S. Department of Energy.¹³⁴

Political will does not necessarily mean political harmony and, at times, requests do not produce results as quickly as threats or demands. According to Ms. Shon, the Hawai‘i Department of Accounting and General Services (“DAGS”) proceeded with an energy-saving contract with NORESKO¹³⁵ because then Governor Linda Lingle cut or denied

¹²⁶ Haw. Sess. Laws 269, *supra* note 10.

¹²⁷ *Id.*

¹²⁸ Telephone Interview with Hermina M. Morita, *supra* note 79; *see also* 2002 Haw. Sess. Laws 230, www.capitol.hawaii.gov/session2002/Bills/SB2179_.htm.

¹²⁹ Telephone interview with Hermina M. Morita, *supra* note 79.

¹³⁰ *Id.*

¹³¹ Interview with Carilyn O. Shon, Energy Conservation Program Manager, Strategic Industries Division, Department of Business, Economic Development, and Tourism, State of Hawaii (Apr. 18, 2012).

¹³² Email correspondence with Carilyn O. Shon, Energy Conservation Program Manager, Strategic Industries Division, Department of Business, Economic Development, and Tourism, State of Hawai‘i (Feb. 20, 2013).

¹³³ Interview with Carilyn O. Shon, *supra* note 131.

¹³⁴ *Id.*

¹³⁵ NORESKO is an energy performance contractor, formed in 1984 as NEES Energy. *See* NORESKO LLC (2012), <http://www.noresko.com/values.html>.

increases to the DAGS budget for utility bills, which were increasing significantly due to rising oil prices.¹³⁶ This shortfall pressured DAGS to expedite efficiency measures, including development of performance contracting and the subsequent contract with NORESO.¹³⁷ This kind of hardball tactic, as Ms. Shon described it, could be very effective; observing that when DAGS was put “between a rock and a hard place,” they “turned rotten cabbage into kim chee.”¹³⁸

Eric Nishimoto, Branch Chief at the Public Works Division of DAGS, also described the building process as “very political.”¹³⁹ If DAGS asks for money, the project “has to fit into the mix” of what politicians are seeking, in a situation like Ms. Shon described.¹⁴⁰ On the other hand, Mr. Nishimoto admits, “[i]f there was no law out there, no one would do it.”¹⁴¹

Mr. Nishimoto described that twenty years ago, someone presented for state use the Hawai‘i Model Energy Code, “[n]o one liked it,” but DBEDT “modified and pushed it.”¹⁴² Now, the Model Energy Code is routinely used. From that experience, Mr. Nishimoto understood DBEDT’s role in efforts to achieve the current energy initiative.¹⁴³ He asserts that most state agencies are already participants in the pursuit of state energy goals.¹⁴⁴ Others can and will get on board if one agency takes action and political will catches on. “Someone has to step up.”¹⁴⁵

The provisions contained in Acts 96 and 155 create a framework within which the construction, monitoring, and improvement of green buildings can be employed in the pursuit of aggressive renewable portfolio standard targets. Hawai‘i is one of thirty-three states with renewable portfolio standard (“RPS”) requirements.¹⁴⁶ The RPS requirements establish a minimum percentage of electricity that retailers must provide

¹³⁶ Email correspondence with Carilyn O. Shon, *supra* note 132.

¹³⁷ Interview with Carilyn O. Shon, *supra* note 131.

¹³⁸ *Id.*

¹³⁹ Interview with Eric K. Nishimoto, Branch Chief, Public Works Division, Department of Accounting and General Services, State of Hawaii (Apr. 17, 2012).

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ Greg Dierkers, Program Director, Environment, Energy, and Transportation Division, National Governors’ Association Center for Best Practices, *State Policies to Support Biomass Development*, U.S. Department of Energy’s Biomass 2011 Conference, July 26-27, 2011.

from renewable energy sources.”¹⁴⁷ Hawai‘i initially adopted RPS in 2004 and has since revised its renewable energy portfolio several times over the last decade.¹⁴⁸ On January 23, 2004, a mere four legislators introduced Senate Bill 2474.¹⁴⁹ In 2004, the Hawai‘i legislature enacted Act 95, which required electric utilities to meet a renewable portfolio standard of fifteen percent for 2015 and twenty percent for 2020.¹⁵⁰ Act 95 was codified as Hawai‘i Revised Statutes (“HRS”) §196-41; the Act also established the RPS within HRS Chapter 269 relating to the Hawai‘i Public Utilities Commission.¹⁵¹

On January 25, 2006, a group of nine senators introduced Senate Bill 3185.¹⁵² This bill made amendments to improve the RPS law including listing circumstances that could affect the public utilities’ ability to fulfill their obligation to meet the RPS.¹⁵³ On June 2, 2006, the bill became Act 162.¹⁵⁴

On January 27, 2009, House Bill 1464 was introduced by twenty legislators, which is five times the number of sponsors than that of Senate Bill 2474 in 2004, five years earlier.¹⁵⁵ On June 25, 2009, Governor Lingle signed the bill as Act 155, the latest iteration of Hawaii’s renewable portfolio standards.¹⁵⁶ The Act amended HRS §269-92 to increase the RPS

¹⁴⁷ K.S. Cory, National Renewable Energy Laboratory, *Renewable Portfolio Standards in the States: Balancing Goals and Implementation Strategies*, <http://www.nrel.gov/docs/fy08osti/41409.pdf> (Dec. 2007).

¹⁴⁸ *Hawai‘i Renewable Portfolio Standard*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (2012), http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=HI06R&re=1&ee=1.

¹⁴⁹ STATE OF HAWAI‘I DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM, PROGRESS REPORT TO THE GOVERNOR AND THE LEGISLATURE OF THE STATE OF HAWAI‘I PURSUANT TO SECTION 196-41, HAWAI‘I REVISED STATUTES (HRS) (2011), available at <http://hawaii.gov/dbedt/main/.../2011-renewable-portfolio-standards.pdf>.

¹⁵⁰ S.B. 2474, HD2, 22nd Leg., Reg. Sess. (Haw. 2004), http://www.capitol.hawaii.gov/session2004/Bills/SB2474_HD2_.htm.

¹⁵¹ *Id.*

¹⁵² S.B. 3185 Measure History, 23rd Leg., Reg. Sess. (Haw. 2006), <http://www.capitol.hawaii.gov/session2006/status/SB3185.asp>.

¹⁵³ S.B. 3185, CD1, 23rd Leg., Reg. Sess. (Haw. 2006), http://www.capitol.hawaii.gov/session2006/Bills/SB3185_CD1_.htm.

¹⁵⁴ *Hawai‘i Renewable Portfolio Standard*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (2012), http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=HI06R&re=1&ee=1.

¹⁵⁵ H.B. 1464 Measure History, 25th Leg., Reg. Sess. (Haw. 2009), http://www.capitol.hawaii.gov/Archives/measure_indiv_Archives.aspx?billtype=HB&billnumber=1464&year=2009.

¹⁵⁶ *Id.*

goals to twenty-five percent by 2020. The act further mandated that forty percent of net electricity sales by electric utility companies in Hawai‘i be from renewable electrical energy by 2030 and that energy efficiency measures cause the equivalent of a thirty percent reduction in energy use.¹⁵⁷ Achievement of these goals will result in Hawai‘i deriving seventy percent of its energy from clean energy (i.e., renewable energy and energy efficiency) by 2030.¹⁵⁸ Act 155 is codified in the RPS and Energy Efficiency Portfolio Standards (“EEPS”) provisions in Part V of HRS, Chapter 269.¹⁵⁹

Act 155 was a byproduct of the signing of a memorandum of understanding between the State of Hawai‘i and the U.S. Department of Energy.¹⁶⁰ This memorandum, signed on January 28, 2008, is called the Hawai‘i Clean Energy Initiative (“HCEI”).¹⁶¹ According to Act 155, the HCEI created a partnership “aimed at accelerating the use and development of energy efficiency and renewable energy technologies” while “allowing Hawai‘i to serve as a model and demonstration for the U.S. and other island communities.”¹⁶² Included among the seven goals of the HCEI were the seventy percent clean energy goals, and lastly, that Hawai‘i “serve as a national model.”¹⁶³

In 2006, House Bill 2175 (“HB 2175”) was introduced as part of the House Majority Caucus package by a large contingent of supporters, thirty-nine legislators including Speaker Calvin K.Y. Say.¹⁶⁴ HB 2175 also had support in the form of a companion bill, Senate Bill 2957.¹⁶⁵ HB 2175 sought to accomplish, among other goals, an amendment to the energy resources law “by establishing provisions relating to energy efficiency and environmental standards for state facilities, motor vehicles, and transportation fuel.”¹⁶⁶ After passing through various committees, HB

¹⁵⁷ *Id.*

¹⁵⁸ Codiga, *supra* note 12 (citing 2009 Haw Sess. Laws, Act 155 §§ 3, 11).

¹⁵⁹ *Id.* (citing Haw Rev. Stat. §§ 269-91 – 269-96 (2010)).

¹⁶⁰ 2009 Haw. Sess. Laws 462,
http://www.capitol.hawaii.gov/session2009/Bills/HB1464_.PDF . The website for HCEI is available at: <http://www.hawaiicleanenergyinitiative.org/>.

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Bills Passed by the Hawai‘i State Legislature Regular Session of 2006*, LEGISLATIVE REFERENCE BUREAU SYSTEMS OFFICE (2006), <http://hawaii.gov/lrb/legis06/passed06.pdf>.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

2175 passed final reading in both houses of Hawaii's legislature unanimously.¹⁶⁷

Considering the actions of the legislature and, perhaps on prompting from the executive branch, on May 11, 2006, DBEDT convened a meeting of all cabinet members.¹⁶⁸ According to DBEDT, this meeting initiated the state agencies' attempts to follow green energy mandates by establishing a framework for the agencies to plan, implement, and report energy efficiency efforts.¹⁶⁹ This collective action by the state agencies is referred to as the Lead By Example initiative.¹⁷⁰

On May 12, 2006, Governor Linda Lingle signed HB 2175 into law as Act 96.¹⁷¹ Act 96 was codified as HRS § 196-9.¹⁷² The statute opens with a directive echoing the previous day's agency meeting: "Each agency is directed to implement, to the extent possible, the following goals during planning and budget preparation and program implementation."¹⁷³ The green building provision of HRS § 196-9 is in section (b)(1) of the statute:

With regard to buildings and facilities, each agency *shall*:

¹⁶⁷ H.B. 2175, *supra* note 32.

¹⁶⁸ STATE OF HAWAI'I DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM, REPORT TO THE 2011 HAWAI'I STATE LEGISLATURE: LEAD BY EXAMPLE: STATE OF HAWAI'I AGENCIES' ENERGY INITIATIVES FY 2010-2011 21-23, 8 (2012) [hereinafter DBEDT REPORT], *available at* <http://hawaii.gov/dbedt/main/about/annual/2012-reports/2011-lbe.pdf>.

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² HAW. REV. STAT. § 196-9, *supra* note 76; *see also* H.B. 2175, *supra* note 32. § 196-9 provides in part:

Energy efficiency and environmental standards for state facilities, motor vehicles, and transportation fuel.

(a) Each agency is directed to implement, to the extent possible, the following goals during planning and budget preparation and program implementation.

(b) With regard to buildings and facilities, each agency shall:

(1) Design and construct buildings meeting the Leadership in Energy and Environmental Design silver or two green globes rating system or another comparable state-approved, nationally recognized, and consensus-based guideline, standard, or system, except when the guideline, standard, or system interferes or conflicts with the use of the building or facility as an emergency shelter....

HAW. REV. STAT. § 196-9 (2012).

¹⁷³ HAW. REV. STAT. § 196-9, *supra* note 76; *see also* H.B. 2175, CD1 *supra* note 32.

Design and construct buildings meeting the Leadership in Energy and Environmental Design silver or two green globes rating system or another comparable state-approved, nationally recognized, and consensus-based guideline, standard, or system, except when the guideline, standard, or system interferes or conflicts with the use of the building or facility as an emergency shelter.¹⁷⁴

The legislation is silent as to which agency enforces the law. However, DAGS is typically the agency that manages state building projects, according to former state legislator and Director of Environmental Quality Control for the state, Gary Hooser.¹⁷⁵

Additional tools for energy efficiency, HRS § 46-19.6 and Act 155, allow for priority permitting, benchmarking and retro-commissioning. On May 12, 2006, the Hawai'i state legislature amended HRS § 46-19.6.¹⁷⁶ The amendment required county permit processors to create a priority permitting process for applications from private construction projects that incorporate LEED Silver certification standards in their designs.¹⁷⁷ The statute provides that, "each county agency that

¹⁷⁴ HAW. REV. STAT. § 196-9, *supra* note 76 (emphasis added).

¹⁷⁵ Interview with Gary Hooser, Director of Environmental Quality Control, State of Hawai'i (Feb. 27, 2012).

¹⁷⁶ *Hawai'i Priority Permit Processing for Green Buildings*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (2012), http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=HI25F&RE=1&EE=1.

¹⁷⁷ HAW. REV. STAT. § 46-19.6 (2012). The full text of the amended statute provides:

[§46-19.6] County building permits; incorporation of energy and environmental design building standards in project design; priority processing.

(a) Each county agency that issues building, construction, or development-related permits shall establish a procedure for the priority processing of a permit application submitted by a private entity for a construction project that incorporates energy and environmental design building standards into its project design. The permit processing procedure shall give priority to private sector permit applicants at no additional cost to the applicant. Any priority permit processing procedure established by a county pursuant to this section shall not imply or provide that any permit application filed under the priority processing procedure shall be automatically approved.

(b) For the purposes of this section:

"Energy and environmental design building standards" means the leadership in energy and environmental design silver or two green globes rating system or another comparable state-approved, nationally recognized, and consensus-based guideline, standard, or system.

issues building, construction, or development-related permits shall establish a procedure for the priority processing of a permit application submitted by a private entity for a construction project that incorporates energy and environmental design building standards into its project design.”¹⁷⁸

The definition of “energy and environmental design building standards” is the LEED Silver standard “or another comparable state-approved, nationally recognized, and consensus-based guideline, standard, or system.”¹⁷⁹ A private entity means “any permit applicant that is not the State, a county, the federal government, or any political subdivision thereof.”¹⁸⁰ Thus, developers of private commercial and residential building projects may apply for priority processing pursuant to HRS § 46-19.6.

Act 155, mentioned *supra* as redefining the RPS, also contains two provisions that involve the energy monitoring and maintenance of public buildings. These provisions are necessary to gauge the effectiveness of the Act 96 green building mandate.

Act 155 includes a benchmarking requirement among its many sections. Benchmarking is “a process which involves calculating the building’s annual energy consumption per square foot, allowing buildings to be compared and identifying areas for improving energy efficiency. Buildings are given an ‘energy usage intensity’ score, allowing buildings to be quickly compared and identify areas for improving energy efficiency.”¹⁸¹ This passage of Act 155, codified as HRS § 196-30, provides that “each state department with responsibilities for the design and construction of public buildings and facilities shall benchmark every existing public building that is either larger than five thousand square feet or uses more than eight thousand kilowatt-hours of electricity or energy per year.”¹⁸²

“Private entity” means any permit applicant that is not the State, a county, the federal government, or any political subdivision thereof. [L 2006, c 96, §29].

HAW. REV. STAT. § 46-19.6 (2012).

¹⁷⁸ *Id.* § 46-19.6(a).

¹⁷⁹ *Id.* § 46-19.6(b).

¹⁸⁰ *Id.* § 46-19.6.

¹⁸¹ DBEDT REPORT, *supra* note 168, at 23.

¹⁸² HAW. REV. STAT. § 196-30(a) (2012). The benchmarking tool is the ENERGY STAR portfolio management tool or its equivalent. According to ENERGY STAR’s website, ENERGY STAR is defined as follows:

Also referred to as an “EPA rating,” an “ENERGY STAR rating,” or simply “the Rating” is a seamless, standardized national benchmark that helps architects and building owners assess energy use relative to similar buildings. The estimated energy use of building designs and the

The other relevant provision of Act 155 that is connected to the public mandate is a retro-commissioning requirement. Retro-commissioning is “a process that seeks to improve how building equipment and systems function together. Depending on the age of the building, retro-commissioning can often resolve problems that occurred during design or construction or address problems that have developed throughout the building’s life.”¹⁸³ Act 155, codified as HRS § 196-30, provides that “public buildings shall be retro-commissioned no less often than every five years,” and that “the energy resources coordinator shall establish retro-commissioning guidelines by January 1, 2010.”¹⁸⁴

The benchmarking and retro-commissioning sections of Act 155 allow the state to monitor existing buildings and update those buildings to meet the energy consumption standards of other similar buildings. They are crucial in gauging the success of buildings constructed pursuant to the building mandate in Act 96, and in monitoring and bettering other existing buildings.

actual use of existing buildings are compared to data from the Commercial Building Energy Consumption Survey (CBECS), which is conducted every 4 years by the U.S. Department of Energy. This database provides EPA with the means to compare estimated and actual energy use against the energy benchmarks from the survey of existing buildings.

EPA’s energy performance rating is based on a scale of 1 to 100—with 100 the most energy efficient—which provides a quick comparison of the building’s estimated or actual energy use to that of similar buildings throughout the United States. EPA’s rating is deployed through two no-cost, online tools:

Target Finder, used for setting design targets and rating estimated energy use of design projects

Portfolio Manager, used for measuring the actual energy performance of occupied and operating buildings.

The EPA rating is achieved by converting (user-entered) site energy into source energy to account for greenhouse gas emissions associated with energy production and transmission losses. The EPA energy performance rating is used to establish and validate goals for industry groups as well as Federal, State, and local governments.

Definitions, ENERGY STAR, http://www.energystar.gov/index.cfm?c=cbd_guidebook.cbd_guidebook_learn_more_1

¹⁸³ *Building Commissioning: A Golden Opportunity for Reducing Energy Costs and Greenhouse-Gas Emissions*, citing the California Commissioning Collaborative, LAWRENCE BERKELEY LABORATORY (2013), <http://cx.lbl.gov/definition.html>.

¹⁸⁴ HAW. REV. STAT. § 196-30(b), *supra* note 182.

IV. DO HAWAII'S GREEN BUILDING LAWS ACHIEVE REGULATORY SUCCESS BY CREATING GREEN BUILDINGS?

At first glance, Hawaii's green building laws appear to be working. Energy efficiency measures and ratings appear prominently on a number of government buildings. This section of the paper will analyze whether Hawaii's laws adequately address the challenge of reducing energy consumption of public buildings, especially when one considers the acts in comparison to the rest of the United States. Act 96 affects only state facilities. The priority processing measures required by HRS § 46-19.6 can apply to private commercial and residential construction,¹⁸⁵ therefore expanding the reach of LEED standards beyond public buildings and into private development.

In order to measure the regulatory success of green building statutes, this paper will look at two different aspects of the statute and its effects that suggest the strength of a law's implementation: (1) the legal signals contained within the language of the legislation, and the strength of those signals to mandate that state agencies act; and (2) the real world effects of the law, including projects completed and planned since the law's enactment. This analysis will paint a portrait of the law's accomplishments to date and its potential impact going forward.

A. *Different Standards, Different Triggers: Do Other States' Laws Mandate State Agencies to Act?*

Washington and Connecticut seem to have similarly worded laws to Hawai'i, mandating certain actions to be taken regarding the certification of new public buildings and LEED. Despite this similarity, each differs in having its own unique twist on their separate mandates, what action is triggered by statutory language, and what language functions as that trigger. An examination of the other states' "legal signals" may yield evidence of the strengths and weaknesses of Hawaii's green building legislation.

1. Washington's Law

Washington has "shall" in its statutory language, much like Hawai'i, and it is likely not a coincidence that the two states' acts mirror each other. As the first state green building law, Washington's statute set a model for other states to follow.

Although the Washington law contains the seemingly strong verb "shall," the term "major facility projects" elsewhere in the statute has the potential to be problematic.¹⁸⁶ The latter term "limits the law's application

¹⁸⁵ HAW. REV. STAT. § 46-19.6, *supra* note 177.

¹⁸⁶ WASH. REV. CODE § 39.35D.020(5)(b), *supra* note 31. The definition of "major facility project" in the Definitions section of the Revised Code of Washington is lengthy and contains many exceptions:

to new construction projects and substantial renovations larger than 5,000 gross square feet.”¹⁸⁷ Transmitter buildings, hospitals, pumping stations, and research laboratories are not deemed “major facility projects.”¹⁸⁸

Another potential obstacle to progress lies in what can nullify a “major facility project” under the law. A building is no longer a “major facility project” if “the department, public school district, or other applicable agency and the design team determine the LEED silver standard . . . to be not practicable” for the project.¹⁸⁹ There lacks a definition for what is “not practicable.” If for any reason, the above find the project “not practicable,” then a lower standard is followed if possible.

Another problem with the law is a provision that protects the project designers and builders from liability should a project fail to meet LEED standards. Revised Code of Washington § 39.35D.070 provides:

39.35D.070 Liability for failure to meet standards.

A member of the design or construction teams may not be held liable for the failure of a major facility project to meet the LEED silver standard or other LEED standard

5)(a) "Major facility project" means: (i) A construction project larger than five thousand gross square feet of occupied or conditioned space as defined in the Washington state energy code; or (ii) a building renovation project when the cost is greater than fifty percent of the assessed value and the project is larger than five thousand gross square feet of occupied or conditioned space as defined in the Washington state energy code.

(b) "Major facility project" does not include:

(i) Projects for which the department, public school district, or other applicable agency and the design team determine the LEED silver standard or the Washington sustainable school design protocol to be not practicable; or

(ii) transmitter buildings, pumping stations, hospitals, research facilities primarily used for sponsored laboratory experimentation, laboratory research, or laboratory training in research methods, or other similar building types as determined by the department. When the LEED silver standard is determined to be not practicable for a project, then it must be determined if any LEED standard is practicable for the project. If LEED standards or the Washington sustainable school design protocol are not followed for the project, the public school district or public agency shall report these reasons to the department.

WASH. REV. CODE § 39.35D.020(5)(b) (2012).

¹⁸⁷ Stephen Del Percio & Preston D. Koerner, *State and Local Green Building Laws and Initiatives*, in *THE LAW OF GREEN BUILDINGS* 73 (J. Cullen Howe & Michael B. Gerrard ed., 2010).

¹⁸⁸ WASH. REV. CODE § 39.35D.020(5)(b)(ii), *supra* note 31.

¹⁸⁹ *Id.* § 39.35D.020(5)(b)(i).

established for the project as long as a good faith attempt was made to achieve the LEED standard set for the project.¹⁹⁰

This section of the code takes away much of the enforcement teeth of the law. As long as good faith is exercised, the inability of designers and builders to complete a project to meet supposedly mandatory LEED standards is shielded from legal action.

Another potential issue with the statutory language of the Washington law is the use of the LEED Silver standard. The LEED standards have gone through one substantial change since 2005 (LEED v.3.0) and underwent another revision in November 2012. However, the LEED Silver standard referred to in the Washington State law was the version that existed in 2005.¹⁹¹ The definition of “LEED silver standard” in the law also does not refer to any other equivalents. Washington does not need subsequent legislation in order to change the standard. The law is not frozen in time; as it stands, the law is subject to the alterations to the LEED standard made by the USGBC. This is exactly Professor Wolf’s theory of the “delegation problem” of the “moving target,” where a governmental entity is subject to an altered law that they had no input in creating.¹⁹² It is perhaps an even greater issue due to the absence of alternatives such as Green Globes¹⁹³ in Washington’s legislation.

Stuart Simpson, Agency Energy Project Director for the Washington State Department of Enterprise Services (“WSDS”), asserts that using LEED alone and the idea of a “moving target” is not a problem in implementing his state’s law.¹⁹⁴ Mr. Simpson considers the LEED standard “fine” in that it encompasses “best practices and technology.”¹⁹⁵ Mr. Simpson compared the LEED standard with building codes, which also change periodically.¹⁹⁶ The negative aspects of the LEED standard were lessened by the contribution of those in the design and building industries and the periods of public comment.¹⁹⁷ Specifically, Mr. Simpson stated that the “nice thing about LEED is it’s open, peer-reviewed, member-directed standard.”¹⁹⁸ Everyone involved in the state

¹⁹⁰ *Id.* § 39.35D.070.

¹⁹¹ *Id.*

¹⁹² Wolf, *supra* note 58, at 949.

¹⁹³ See GREEN GLOBES, *supra* note 77.

¹⁹⁴ Telephone Interview with Stuart J. Simpson, Green Building Advisor, Washington State Department of Enterprise Services (Apr. 13, 2012).

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

green building process knows and uses that particular standard: “Our architects, engineers, consultants are fully versed in LEED.”¹⁹⁹ Mr. Simpson did concede that it was “tough to keep up” when the standard changed.²⁰⁰ Overall, the utilization of a third-party standard was less of a concern for Mr. Simpson than its applicability, a sentiment similar to that of the USGBC Hawai‘i chapter and Hawai‘i lawmakers.

Mr. Simpson provided an example of those trying to create their own LEED-less standard. According to Mr. Simpson, as a “pushback” to the green building mandate, the K-12 schools in Washington adopted their own protocol for buildings.²⁰¹ This protocol, the Washington Sustainable Schools Protocol, has undergone one revision since its first edition in 2006; the latest version of the protocol is from 2010.²⁰² The school protocol may be more of an ideal standard to proponents of Professor Wolf’s view; however, questions remain about the frequency of revisions to the protocol and if it remains concurrent with other national standards.

Washington’s green building law can be considered a success after observing the number of state facility projects certified subsequent to the passage of the Revised Washington Code. As of September 20, 2010, twenty projects, twice that achieved by Hawai‘i in a similar time frame, had been LEED Certified.²⁰³ Seven of the twenty LEED certified projects were certified Silver, twelve of the projects achieved Gold, and one project reached Platinum.²⁰⁴ Twenty-two LEED projects were then in

¹⁹⁹ *Id.*

²⁰⁰ *Id.* Mr. Simpson also elaborated on the language of the statute in later correspondence:

Even though there are some “wiggle room” words and sentences in the statute, I believe those were included to avoid opposition to passing the law in the first place, and avoids a lot of litigation or the threat of it between owners and architect, and owners and contractors who “work in good faith” towards a LEED Silver goal, but may not make it for a variety of reasons. I believe, thus far in the implementation there has been a tremendous “good faith” effort and there has been relatively few projects that take some kind of exemption from the requirement.

Email correspondence with Stuart J. Simpson, *supra* note 101.

²⁰¹ Telephone Interview with Stuart J. Simpson, *supra* note 194.

²⁰² *Washington Sustainable Schools Protocol: Criteria for High Performance Schools*, OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION (2010), <http://www.k12.wa.us/SchFacilities/Programs/HighPerformanceSchools/WSSP2010Criteria.pdf>.

²⁰³ *Green Building: State LEED Projects*, WASHINGTON STATE DEPARTMENT OF ENTERPRISE SERVICES, http://des.wa.gov/SiteCollectionDocuments/Facilities/Energy/Green_Website/StateGreenBuildingReport-2010.pdf.

²⁰⁴ *Id.*

design, twenty-eight projects were under construction, and twenty-three buildings were occupied but not yet LEED certified.²⁰⁵

An average of five buildings a year achieving at least LEED Silver in a span of four years seems to be quite an achievement. In addition, a greater number of state projects certified as LEED Gold than as LEED Silver perhaps suggests that a higher standard is within reach for most state projects. Further analysis shows that five of the projects certified as Gold satisfied only Silver certification criteria at the pre-design stage.²⁰⁶ This data indicates that a project can adjust upward for a higher certification level during the building process. The large number of certified buildings and the percentage of those buildings that are Gold certified or higher could lead an observer to regard the Washington green building law as a success.

WSDES's Mr. Simpson pointed to several sources for the prevalence of LEED certifications, particularly those that achieved Gold. He stated that the institutions creating the building, for example schools, deserve credit for Gold certification because "they want to get as high a ranking as they can."²⁰⁷ Mr. Simpson also opined that institutions also have their own standards and climate commitment goals, and the accomplishment makes for good publicity.²⁰⁸ Architects involved also receive "a feather in their cap" for achieving Gold certification.²⁰⁹ According to Mr. Simpson, "everyone has incentive" to pursue higher levels of certification.²¹⁰

Mr. Simpson states that when a newly constructed state building fails to meet the LEED Silver standard, he has limited ability to act on the infraction.²¹¹ He "makes it uncomfortable" for the agency failing to meet the LEED Silver criteria by requiring an explanation of why the building cannot reach those criteria.²¹² The explanation must be on the agency or school letterhead and signed by someone who has authoritative power at the particular project location, for example, a superintendent or principal.²¹³ According to Mr. Simpson, this creates some accountability

²⁰⁵ *Id.*

²⁰⁶ *Id.*

²⁰⁷ Telephone Interview with Stuart J. Simpson, *supra* note 194.

²⁰⁸ *Id.*

²⁰⁹ *Id.*

²¹⁰ *Id.*

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Id.*

for the noncompliant party when the department attaches the explanation to the biannual report filed with the legislature.²¹⁴

The Washington law shares a common problem with Hawaii's green building laws in its implementation-funding. Mr. Simpson described his role in overseeing the implementation of the law as "part-time," because Washington State would not fund the position.²¹⁵ As such, it has been difficult to keep up with his myriad responsibilities.²¹⁶

The problem with funding has also affected Washington State's ability to monitor buildings after their construction. Mr. Simpson set up a

²¹⁴ *Id.* Mr. Simpson, in subsequent correspondence, further described his department's verification system ("WSDES" is referred to as "DES"):

DES developed guidelines that gave DES the opportunity to "verify" that the projects were on the right track to achieve at least LEED Silver. This process is called the DES LEED Quality Assurance process. It involves submittals by the design team on all state projects that are required to adhere to the LEED Silver requirement. These submittals come in at Schematic Design, Design Development, and Construction Documents phases of design. Then there is also a Post Construction submittal. DES also provides for free training of the selected contractor to ensure they are well prepared for the documentation efforts and other tips regarding LEED and their LEED submittal.

This involvement with each state project (around 20 new projects/year, over 110 total) allows me the opportunity to interface with each project team. To evaluate their submittal and verify that they are on the right track. I have also spent time visiting all the State Universities (6 total) and other agencies responsible for construction administration to present the DES LEED Quality Assurance process and answer any questions. DES is responsible for construction projects in all the Community and Technical Colleges and several agencies, including Military Dept., Veteran's Affairs, State Patrol, School for the Deaf and School for the Blind. So most of the State building construction is administered through DES.

I believe it is this close coordination with all agencies involved with design and construction administration that has helped with Washington's success.

Email correspondence with Stuart J. Simpson, *supra* note 101.

The section of the statute that gave DES (then General Administration) the authority to promulgate this law, was ... RCW 39.35D.060[:]

(1)(a) The department, in consultation with affected public agencies, shall develop and issue guidelines for administering this chapter for public agencies. The purpose of the guidelines is to define a procedure and method for employing and verifying activities necessary for certification to at least the LEED silver standard for major facility projects.

WASH. REV. CODE § 39.35D *supra* note 31 (emphasis added).

²¹⁵ Telephone Interview with Stuart J. Simpson, *supra* note 194.

²¹⁶ *Id.*

Post-Occupancy Evaluation pilot program following the passage of Washington's green building mandate.²¹⁷ Mr. Simpson "thought it would be needed."²¹⁸ The Washington legislature has not provided adequate funding for the program, so Mr. Simpson had to adapt to the challenge of attempting to make his program work regardless. Instead of site visits, Mr. Simpson now conducts online surveys of the building occupants.²¹⁹ This approach appears to be flawed because it relies upon the participation and veracity of the building occupants. Despite this, and perhaps because of his department's limited resources, Mr. Simpson believes the survey is an appropriate method to monitor the status of buildings and is pursuing a program that can be implemented automatically.²²⁰ Mr. Simpson explains that some of the "feedback from maintenance staff is better than nothing. The value would be in what onsite improvements can be made. It's hard to do with a survey."²²¹ Mr. Simpson's actions and ideas seem to resemble those made by DAGS and NORESCO during the creation of their energy performance contract. The submetering conducted by NORESCO help indicate what onsite improvements are possible; at the same time, that type of metering reduces the time and energy normally spent by employees in gathering the pertinent data.

Should Mr. Simpson and his department receive funding, the enforcement for the program would come from the agency or department involved: "Someone at the institution level needs to send it out."²²² This would increase accountability in the same fashion as the letters Mr. Simpson requires when a building project cannot meet the LEED Silver requirement. Mr. Simpson can encourage participation in the program by incorporating the officials in power at their respective institutions.

2. Connecticut's Law

Similar to the legislation in both Washington and Hawai'i, Connecticut's Public Act 07-242 also incorporates the term "shall" in its language.²²³ However, unlike the other two, Connecticut's law leaves the responsibility of creating the green building regulations to the Office of Policy and Management ("OPM").²²⁴ In 2011, the responsible agency subsequently changed when the Connecticut legislature passed Public Act

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ *Id.*

²²⁰ *Id.*

²²¹ *Id.*

²²² *Id.*

²²³ Conn. Acts 1007, *supra* note 106.

²²⁴ *Id.*

11-80, transferring the OPM's duties to the newly established Department of Energy and Environmental Protection ("DEEP").²²⁵ Because the legislature shifted the responsibilities from one agency department to another when it created the energy department, that precedent could serve as an indication that the Connecticut law is capable of being flexible with its green building law. When LEED standards change in 2013 and beyond or if other circumstances arise in the future, Connecticut has shown it can pass legislation to address those changes.

John Ruckes, an energy analyst who helped to create the regulation compliance manual and now writes grants for DEEP, suggests that there are flaws in the Connecticut green building law structure. Mr. Ruckes regards the Connecticut law as successful.²²⁶ Despite this assessment, Mr. Ruckes continues, "it would have been better if we took Hawaii's approach."²²⁷ In the same fashion as the Washington Sustainable Schools Protocol, the Connecticut Manual for High Performance Buildings Compliance may be in need of an update. The problem is that "LEED and building codes are constantly upgraded, as they should be. [The regulations] could slide."²²⁸ The manual was a substantial undertaking for OPM to create and update.²²⁹ As issues came up, Mr. Ruckes would attempt to address them: "The idea of the manual is that you do not have to change it, but you do. Someone has to do it."²³⁰ The regulations were complex and comprised much more than energy issues, which are more directly Mr. Ruckes's area of expertise. Mr. Ruckes had to bring in expertise for those areas in which he lacked adequate knowledge, "I had to rely on other people, depend on them being straight."²³¹ This dependence on outside help seems to create the same issues that some contend about the LEED standard.

Mr. Ruckes, the former energy analyst for the Connecticut Department of Energy and Environmental Protection, states that Hawaii's method of approaching green buildings "would have been the easy way."²³² The Connecticut legislation required that several requirements be addressed. "The big one," according to Mr. Ruckes, was the condition that the base minimum energy performance for all buildings be at least twenty

²²⁵ Conn. Acts 1266, *supra* note 125.

²²⁶ Telephone Interview with John Ruckes, Planning Specialist, Connecticut Department of Energy and Environmental Protection (Apr. 19, 2012).

²²⁷ *Id.*

²²⁸ *Id.*

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ *Id.*

²³² *Id.*

percent better than the performance required by ASHRAE Standard 90.1-2004.²³³ Mr. Ruckes was glad that this particular provision was included, because it demanded a higher standard of the state buildings.²³⁴ The Office of Policy and Management bumped up the requirement to twenty-one percent when drafting the compliance manual.²³⁵

When discussing the implementation of the regulations, Mr. Ruckes discussed the fights his department had with the University of Connecticut (“UConn”) over building projects.²³⁶ The school did not want to comply with the regulations in the manual. They wanted to follow the LEED Silver standard.²³⁷ Mr. Ruckes told university officials that they had to comply with the other regulations, in addition to the LEED Silver requirements.²³⁸ In particular, Mr. Ruckes and UConn battled over the integrated design process.²³⁹ The integrated design process is a series of meetings between the owner and the design and construction teams.²⁴⁰ The OPM agreed to lower the required number of meetings from three to one.²⁴¹ UConn also disputed recycle areas and other requirements that had to be onsite.²⁴²

The troubles Mr. Ruckes encountered with UConn provide an interesting counterpart to the institutions striving for Gold certification in Washington State, as described by Mr. Simpson. Both examples involve institutions wishing to proceed according to their own plan; however, in Washington State, the schools aimed and achieved beyond their initial LEED assessment, and in Connecticut, the university struggled to meet the independently-created standard. This comparison is likely indicative of different types of planning by different state institutions, influenced by the varying flexibilities in LEED legal signal in Washington and Connecticut.

Conversely, Mr. Ruckes could utilize any inflexibility in the law. He stated that other groups “griped” when told they were required to follow the compliance manual, but Mr. Ruckes could inform objectors that

²³³ *Id.*

²³⁴ *Id.*

²³⁵ *Id.*

²³⁶ *Id.*

²³⁷ *Id.*

²³⁸ *Id.*

²³⁹ *Id.*

²⁴⁰ *Connecticut Compliance Manual for High-Performance Buildings*, THE CONNECTICUT OFFICE OF POLICY AND MANAGEMENT § 16a-38k-3(b) (2011), <http://www.ct.gov/deep/lib/deep/energy/buildingstandards/compliancemanualhighperformancebuildings.pdf>.

²⁴¹ Telephone Interview with John Ruckes, *supra* note 226.

²⁴² *Id.*

his department was directed to create the regulations and that the state legislature, not he, made the base energy performance requirement number.²⁴³

During the initial creation of the Connecticut regulations, many were interested in the creation process. Mr. Ruckes reflects, “the public hearing had huge levels of input.”²⁴⁴ The Connecticut Department of Health was very concerned about the indoor air quality provision in the regulations.²⁴⁵ This surprised Mr. Ruckes, who had to reevaluate and amend the regulations significantly.²⁴⁶ This input may be a different form of the task force Professor Wolf espouses in addressing the LEED delegation problem.

Another problem Connecticut officials possibly face is the lack of enforcement power. Mr. Ruckes said the department does not have much “authority to stop anyone. It is up to the other agencies and how committed they are.”²⁴⁷ Like DBEDT, Connecticut’s OPM/DEEP takes an advisory role.²⁴⁸ The success of the agency is dependent on the participation of other agencies.²⁴⁹ However, Mr. Ruckes states that although there are weaknesses with that structure there has been feedback.²⁵⁰ He says, “[e]veryone is trying to meet the intent of the regulations.”²⁵¹ This sentiment sounds very similar to statements made by Hawai’i officials regarding department efforts to reach goals.

The attempts by Connecticut agencies to meet the regulations may explain the lack of requests for exemptions. Mr. Ruckes recalled only two such requests. One was for a greenhouse, and the department authorized the exemption, “we did not have the authority, but did it anyway.”²⁵² The other exemption request was for a courthouse, a lease with intent to buy. It was to become a public building, so the department couldn’t grant the exemption.²⁵³

The ability of Mr. Ruckes to use the law to gain compliance, and the low number of exemption requests reported to his department, suggest

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ *Id.*

²⁴⁷ *Id.*

²⁴⁸ *Id.*

²⁴⁹ *Id.*

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Id.*

²⁵³ *Id.*

that Connecticut agencies and others are complying with the regulations. Thus, despite the possible need for revision, the regulations can be construed as successful.

By observing examples of where states have approached the LEED standard in different ways than Hawai‘i, the different legal terms of art created subsequent differing results. Washington State’s decision to refer to LEED alone has not seemed to present too many problems. However, Connecticut’s decision to create a separate set of regulations could compromise its ability to upgrade concurrently with the standards of the rest of the U.S.

B. *Hawaii’s Green Building Laws Mandate State Agencies to Act*

In order to ascertain the ability of Acts 96 and 155 to achieve energy efficiency, it is helpful to examine the laws themselves in terms of what legal terms of art they contain. The extent to which an agency can pursue various actions is based upon the strength of the language in the law. The legal terms of art in Hawaii’s green building laws seem powerful upon initial review. Both laws contain strong legal language, with Act 155 containing even stronger signals than Act 96. However, further scrutiny reveals avenues through which an agency may avoid LEED certification or energy efficiency monitoring.

1. *Hawaii’s Green Building Laws Require State Agencies to Comply to the Extent Possible*

HRS § 196-9, created by Act 96, appears to be a strong piece of legislation through its use of the word “shall” and its application to all public buildings. Its true strength, or lack thereof, is belied by the inclusion of the phrase “to the extent possible” following “shall” in the legislation, weakening the Act. There is no guiding language in the statute as to what “to the extent possible” means, leaving it to the discretion of the agency and subsequently the builders and designers of the project. The Hawai‘i Department of Accounting and General Services’ Division of Public Works (“PWD”) addresses the phrase “to the extent possible” in a 2012 report to the Department of Business, Economic Development, and Tourism.²⁵⁴ Because PWD is the department within DAGS that is chiefly responsible for creating state buildings, their interpretation of “to the extent possible” carries great weight as to the effect of the law. PWD’s “general strategy in defining and applying ‘to the extent possible’” consists of four levels:²⁵⁵

1st level: Look for and implement sustainable design practices and elements that PWD does already, thus no

²⁵⁴ DBEDT REPORT, *supra* note 168, at 42. See Appendix A.

²⁵⁵ *Id.*

impact on operation/function and cost.

2nd level: Look for and implement sustainable design practices and elements that PWD may not have normally done, but can do without negative impact to cost and negative impact to operation/function of the facility.

3rd level: Look for and *possibly* implement sustainable design practices and elements that PWD may not currently do that are not very costly and improve operation/function of the facility. Associated costs, benefits, budget and maybe even schedule will start to become factors in deciding whether to implement.

4th level: Look for and *possibly* implement requirements that PWD may not currently do and will impact cost and will improve operation/function of the facility. Associated costs, benefits, budget and schedule will be factors in deciding whether to implement.²⁵⁶

The emphasis on the word “possibly” in levels 3 and 4 reflects PWD’s recognition of the discretion that the statute gives the agency and that PWD intends to exercise that discretion. PWD elaborates that, “part of the strategy also includes knowing what not to do,” which includes “implement[ing] sustainable design practices and elements that do not offer any real value . . . even if the project budget would allow it.”²⁵⁷ This statement alludes to elements of LEED design that may garner points for LEED certification but do not substantially assist energy efficiency. The strategy also allows for PWD to assess “value” in implementing the project.²⁵⁸ The department may avoid unnecessarily costly measures if the cost far outweighs the benefit.

During interviews, DAGS-PWD points to “to the extent possible” language in discussing their approach to state building projects.²⁵⁹ Eric Nishimoto, Branch Chief at the Public Works Division of DAGS, utilizes an approach that echoes both Mr. Simpson’s and Mr. Tokita’s sentiments. Namely, Mr. Nishimoto says that project coordinators at DAGS review the LEED checklist and assert with a checkmark on “yes,” “no,” or “maybe,” which indicates whether they can implement a listed energy efficiency item or measure.²⁶⁰ Mr. Nishimoto states that DAGS-PWD reviews the

²⁵⁶ *Id.*

²⁵⁷ *Id.*

²⁵⁸ *Id.*

²⁵⁹ Telephone Interview with Eric K. Nishimoto, Branch Chief, Public Works Division, Department of Accounting and General Services, State of Hawai‘i (Apr. 13, 2012).

²⁶⁰ *Id.*

checklist with an eye on what is “affordable” and “practicable.”²⁶¹ DAGS-PWD also tries to aim higher than the lowest point level required for a certain LEED certification.²⁶² Ultimately, Mr. Nishimoto contends that “in some cases, LEED does not apply and does not make sense,” and that DAGS will not “throw away money.”²⁶³ This approach is practical in case of unforeseen circumstances but also seems to avoid attempting measures to attain as many points as possible. An example of how DAGS uses this approach is provided in later analysis of the real world effects of Hawaii’s green building legislation.

2. Hawaii’s Green Building Laws Require State Agencies to Benchmark State Building Projects

The benchmarking requirement in Act 155 appears to have legal terms of art that “out-mandate” Act 96 by demanding state departments to follow certain requirements. The law provides that “each state department with responsibilities for the design and construction of public buildings and facilities shall benchmark every existing public building that is either larger than five thousand square feet or uses more than eight thousand kilowatt-hours of electricity or energy per year.”²⁶⁴ Like the Act 96 building mandate, the Act 155 law uses the key term “shall” in describing the benchmarking actions of state departments.²⁶⁵ The benchmarking law differs from Act 96 in that there is an absence of the “to the extent possible” language.²⁶⁶ As a result, the benchmarking requirement appears to be an even stronger mandate than the Act 96 building mandate.

The benchmarking requirement in Act 155 also mirrors Act 96 in its use of a third-party standard. “Benchmarking shall be conducted using the ENERGY STAR portfolio management or equivalent tool.”²⁶⁷ This language is similar to the other act in that ENERGY STAR is referred to in the law in the same manner as LEED is referenced in Act 96. Additionally, the term “or equivalent” is included in the benchmarking law, allowing for alternative standards.

The retro-commissioning provision in Act 155 seems as non-discretionary as the earlier benchmarking requirement. The language of the legislation appears strong, again reflecting the language of Act 96 in

²⁶¹ *Id.*

²⁶² *Id.*

²⁶³ *Id.*

²⁶⁴ HAW. REV. STAT. § 196-30(a), *supra* note 182.

²⁶⁵ *Id.*

²⁶⁶ Haw. Sess. Laws 269, *supra* note 10.

²⁶⁷ HAW. REV. STAT. § 196-30(a), *supra* note 182.

its use of “shall”: “public buildings *shall* be retro-commissioned no less often than every five years.”²⁶⁸

The legal terms of art of Act 155 seem to strongly encourage an agency to comply with the law. It is only when outside factors come into play, as seen later in this paper, that the law’s weaknesses reveal themselves.

C. *Real World Effects of Hawaii’s Energy Efficiency Laws*

After observing the legal terms of art of the green building laws of Hawai‘i and other states, it follows that one should examine the effects of those signals in order to manifest a clearer picture of the impact of the law. The next section is an analysis of the real world effects of the various state laws—what the law has accomplished. This investigation examines (1) the number of buildings created, repaired, or monitored as a result of the law, and (2) how the law has been implemented.

1. Hawaii’s Green Building Laws Have Created Energy Efficient Buildings

One measure of the “success” of Act 96 is to quantify the number of buildings constructed or renovated in Hawai‘i to satisfy LEED requirements. As of January 2012, ten state buildings have been LEED certified or have been completed and are awaiting certification by USGBC.²⁶⁹ That seems to be a small number. On the other hand, according to a report published in 2012 by the DBEDT, an additional fifty-two LEED projects were then being designed or completed.²⁷⁰ A review of the completed, certified buildings raises further skepticism about the effectiveness of the law. Of the ten buildings, only one is Platinum certified—the HEGC, mentioned in the Introduction to this paper. The remainder consists of three Gold certifications, three Silver, and three Certified.²⁷¹ It is a positive development that almost half of the certified buildings achieved higher LEED standards than required by Act 96. Nonetheless, it is worth noting that three of the ten projects failed to meet the LEED Silver standard. That figure could indicate that the nature of individual projects dictates the level of LEED certification possible. This suggestion echoes a statement referred to in the earlier section of this paper by Ms. Suzuki-Jones, Energy Analyst for DBEDT. Ms. Suzuki-Jones stated that the difference between LEED Silver and LEED Gold is project specific.²⁷² The example given by Mr. Saito, of the parking lot

²⁶⁸ *Id.* § 196-30(b).

²⁶⁹ DBEDT REPORT, *supra* note 168, at 7.

²⁷⁰ *Id.* at 2.

²⁷¹ *Id.* at 6. *See* Appendix B.

²⁷² Interview with Gail Suzuki-Jones, *supra* note 89.

contest winner, also illustrates the point. It could be that Hawai'i projects are unique and have difficulty meeting LEED standards.

In the DBEDT report, two agencies elaborate on their recent building efforts following Act 96: PWD operating under DAGS and the University of Hawai'i ("UH"). The descriptions the two agencies provide in a 2012 report illustrate how Act 96 is implemented by those who follow the statute.

DAGS-PWD recently worked on four projects that fall within the purview of Act 96, with a goal of LEED Silver certification. These projects are the expansion of the Mānoa Public Library, the construction of the New Kohala Public Library, the designing and building of Keaukaha Military Reservation, and the Maui Regional Public Safety Complex.²⁷³ The New Kohala Public Library and Keaukaha Military Reservation projects illustrate how DAGS-PWD interprets the Act 96 mandate and attempts to follow it.

One can observe from the New Kohala Public Library project DAGS-PWD's implementation of the "to the extent possible" language in Act 96. Mr. Nishimoto described the Kohala plot as "expansive" and that there were plans for a "narrow strip of road" on the property.²⁷⁴ According to Mr. Nishimoto, it would have cost approximately \$200,000 for DAGS-PWD to make the road on the Kohala plot permeable.²⁷⁵ The community wanted the permeable road; the alteration could have rendered the project eligible for LEED Platinum certification.²⁷⁶ Mr. Nishimoto did a cost-benefit analysis and calculated that the cost was large but the benefit minute.²⁷⁷ There was also the distinct possibility that PWD could undergo the alteration and the project still would not attain LEED Platinum certification.²⁷⁸ Mr. Nishimoto had to be "the bad guy" and decided not to spend the money to make the road permeable.²⁷⁹ The project received a LEED Gold rating instead of Platinum.²⁸⁰ Although water runoff is a major concern in Hawai'i, Mr. Nishimoto considered the size of the land and the overall impact made by the project.²⁸¹ The project would have gained LEED points but would not have substantially benefited energy or environmental goals. In terms of the energy efficiency goals set in the

²⁷³ DBEDT REPORT, *supra* note 168, at 41-42.

²⁷⁴ Telephone Interview with Eric K. Nishimoto, *supra* note 259.

²⁷⁵ *Id.*

²⁷⁶ *Id.*

²⁷⁷ *Id.*

²⁷⁸ *Id.*

²⁷⁹ *Id.*

²⁸⁰ DBEDT REPORT, *supra* note 168, at 7.

²⁸¹ Telephone Interview with Eric K. Nishimoto, *supra* note 259.

HCEI and mandated by Act 155, Mr. Nishimoto's choice appears to have little to no impact. As opposed to the fears espoused by Walter Simpson, Mr. Nishimoto and DAGS' approach seems to quantify environmental and energy impacts and eschews a "gaming for points" method.²⁸²

The design and build of the Keaukaha Military Reservation demonstrates DAGS-PWD's attention to LEED when federal funding is included. When asked about the Keaukaha project, PWD said that they had to reach LEED Silver because federal money and the Department of Defense were involved.²⁸³ Such details suggest that when federal standards become a factor, normal obstacles to attaining certain LEED standards become easier or a non-choice.

The other state entity with an illustrative description of their building strategy is UH. UH is currently developing fifteen projects subject to Act 96, including the expansion and renovation of the Campus Center at UH Mānoa.²⁸⁴ UH's strategy concerning LEED projects is "in general the goal is for LEED Silver rating certification and, if the goal cannot be attained due to budget constraints, other sustainable design principles will be incorporated into the new or major renovation projects."²⁸⁵ This strategy, in particular the phrase "cannot be attained due to budget constraints," seems to mirror the "to the extent possible" language in Act 96.

The cost of LEED certification itself may be a barrier to achieving a LEED Silver standard. For example, in the fiscal year 2011, the Hawai'i Department of Education initiated ten significant projects valued between \$7-\$10 million dollars that are designed to LEED Silver standards without seeking formal certification.²⁸⁶ Stuart Simpson of the Department of Enterprise Services in Washington State refutes the idea that the cost of certification is an impediment. Mr. Simpson asserts that it only costs zero to three percent more to upgrade from a conventional building to LEED certification.²⁸⁷ Mr. Simpson cites the case studies in his 2010 report that provide the same numbers.²⁸⁸

²⁸² *Id.*

²⁸³ *Id.*

²⁸⁴ DBEDT REPORT, *supra* note 168, at 48; *see* Appendix C.

²⁸⁵ *Id.*

²⁸⁶ *Id.* at 23.

²⁸⁷ Telephone Interview with Stuart J. Simpson, *supra* note 194.

²⁸⁸ *Implementation Of RCW 39.35D High –Performance Green Building*, WASHINGTON DEPARTMENT OF ENTERPRISE SERVICES (OFFICE OF GENERAL ADMINISTRATION) (2010), <http://www.ga.wa.gov/EAS/green/StateGreenBuildingReport-2010.pdf> (*see* Tacoma Community College, p. 32; Centralia College, p. 36; and Olympic College, p. 57).

The certification cost may be an illusory problem, however, if the construction projects ultimately result in a building that would pass certification regardless. If the goal of Act 96 is to create more energy efficient buildings, such buildings will accomplish that goal. The certification itself is superfluous when considering the larger goal of meeting the energy reduction goals set in Act 155 and the HCEI.

Compared with other states such as Washington, the relatively small number of projects completed by Hawai'i over a comparable time frame suggests an inferior law, especially considering that Hawaii's law passed in 2006, just one year subsequent to its equivalent in Washington. However, a simple count does not factor in all the complications involved with public projects. In addition, demographics, population and topography differentiate Hawai'i from Washington and almost any other state. The outlook for Hawai'i is sunnier after one considers the large number of projects in development, and the Hawai'i state agencies' approach to certification. As alluded to, the goal of Hawaii's public agencies may not be to collect LEED certifications but rather to reach target goals set forth in other laws. The consideration of green building construction within this framework leaves one optimistic about Act 96, and the law may be cautiously regarded as a success.

2. Hawaii's Green Building Laws Have Spurred State Agencies to Benchmark State Building Projects

The green building mandate in Act 96 creates energy efficient buildings that contribute toward the RPS goals provided by Act 155. Ms. Morita clarifies that, because state buildings are under state control, those buildings are obviously ones the state can use to implement projects to reach EEPs goals.²⁸⁹ According to Cameron Black, permitting specialist with the Energy division of DBEDT, all the work that DBEDT does now is geared towards the goals set forth by the HCEI and Act 155.²⁹⁰ Mr. Black says, "[o]ur successes are measured in terms of the goals in the laws."²⁹¹

DAGS echoes the claims that the larger state agency goals are the targets set in Act 155. Mr. Nishimoto says in reference to the HCEI and RPS goals, "everyone is trying to do this. It is going to take state agencies and the private sector to meet the overall goal, but the government is taking the lead, and the private industry is taking notice."²⁹² The RPS and

²⁸⁹ Telephone interview with Hermina M. Morita, *supra* note 79.

²⁹⁰ Telephone Interview with Eric K. Nishimoto, *supra* note 259.

²⁹¹ Interview with Cameron Black, Permitting Specialist, Hawai'i State Energy Office, Department of Business, Economic Development, and Tourism, State of Hawai'i (Apr. 18, 2012).

²⁹² Telephone Interview with Eric K. Nishimoto, *supra* note 259.

EEPS goals set out in Act 155 are thus crucial to the executive agencies' recent efforts to attain sustainability.

The mandate in Act 96 has limited scope in that it largely affects new buildings. It has an immediate impact on new construction of state buildings. Mr. Nishimoto and Mr. Kurata from DAGS state that "LEED definitely makes them consider energy efficiency from the onset" and that it is "becoming routine."²⁹³ The LEED process addresses the larger goal of state energy efficiency by requiring builders to undergo commissioning on any new state project.

If an agency follows through and achieves a LEED Silver certification, the building will be able to perform at a certain level of energy efficiency. It is important at that point to continue monitoring the completed building to ensure that it continues performing at a high level, contributing to the overall energy efficiency of the state. Not only should new buildings continue to be monitored, but the many other older public buildings should be analyzed as well, in order to meet the Act 155 RPS goals. The benchmarking and retro-commissioning provisions in Act 155 enable the state to conduct these examinations of existing buildings, but the enforcement of the monitoring depends on funding and contract drafting.

According to a 2012 report, benchmarking efforts in 2011 enabled the identification and certification of eight ENERGY STAR buildings.²⁹⁴ To date, 172 state buildings have been benchmarked.²⁹⁵ Of the 172 buildings, eighteen facilities have achieved ENERGY STAR status.²⁹⁶

Mr. Nishimoto of DAGS-PWD describes the benchmarking efforts as a challenge. "Every 5 years . . . I do not think we will be able to achieve that. There is just not enough funding."²⁹⁷ Mr. Nishimoto stated that his department benchmarked thirty-five out of fifty-one buildings targeted.²⁹⁸ The sixty-nine percent success rate belies that not all buildings are being benchmarked pursuant to Act 155. Mr. Nishimoto revealed that the success they had was due to funding:²⁹⁹ "Public libraries got it because they got the money to do it. NORESO had benchmarking in its proposal. Every year, they take measurements and get verification."³⁰⁰

²⁹³ *Id.*

²⁹⁴ DBEDT REPORT, *supra* note 168, at 24.

²⁹⁵ *Id.* at 24.

²⁹⁶ *Id.* at 24.

²⁹⁷ Telephone Interview with Eric K. Nishimoto, *supra* note 259.

²⁹⁸ *Id.*

²⁹⁹ *Id.*

³⁰⁰ *Id.*

The retro-commissioning law in Act 155 is also being implemented to some extent. If an existing building has not undergone commissioning or retrofitting as mandated by Act 96, retro-commissioning enables those buildings to be inspected for reasonable ways to improve its efficiency. Currently, DAGS is retro-commissioning eleven projects on four islands.³⁰¹

Act 155 benchmarking and retro-commissioning laws derive their strength from the funding given to implement them. Without monetary backing, they are unfunded mandates that agencies cannot follow.

3. Hawaii's Green Building Laws Are a Proven Method of Implementing Energy Efficiency Buildings Without Requiring Upfront Capital Investment

Hawaii's green building laws promote the cost-effective pursuit of energy efficient buildings, and one method is well-known among some legislators. Carlton Saito, aide to Hawai'i State Senator Mike Gabbard, immediately brought up energy performance contracting when asked about the effects of Act 155.³⁰² An energy performance contract is an arrangement between contractors and state agencies wherein the contractor implements energy conservation measures in the agency building.³⁰³ In most arrangements, the contractor pays for retrofits up front at their own expense.³⁰⁴ DBEDT refers to energy performance contracting as "a proven method of implementing energy efficiency capital projects without requiring upfront funds."³⁰⁵ In return, the state agency pays the contractor out of the cost savings for period of time, usually twenty years.³⁰⁶ Because the state saves on upfront costs, and the contracts guarantee a savings, it is "widely seen as a win-win."³⁰⁷ According to Mr. Saito, the project's energy efficiency "depends on the contract. The agency needs to be smart."³⁰⁸ Mr. Saito explained that energy performance contracts are popular not only because they were the "easiest way to save money" but also that "in general, energy efficiency is the low hanging fruit" from which energy savings were most easily derived.³⁰⁹ Examples of these

³⁰¹ DBEDT REPORT, *supra* note 168, at 24.

³⁰² 2009 Haw. Sess. Laws 462,
http://www.capitol.hawaii.gov/session2009/Bills/HB1464_.PDF

³⁰³ Interview with Carlton Saito, *supra* note 90.

³⁰⁴ *Id.*

³⁰⁵ DBEDT REPORT, *supra* note 168, at 24.

³⁰⁶ Interview with Carlton Saito, *supra* note 90.

³⁰⁷ *Id.*

³⁰⁸ *Id.*

³⁰⁹ *Id.*

savings are motion sensors for lighting and changing light lamps from T12s to T8s.³¹⁰

In 2011, DAGS completed construction for a \$33.4 million Phase I energy savings performance contract (“ESPC”) for ten buildings in the Capitol District.³¹¹ This construction resulted from a contract between the state and energy efficiency contractor NORESO.

On January 4, 2011, NORESO and the State increased the ESPC to include \$2.9 million for a two hundred kilowatt capacity photovoltaic system on the roof of the Kalanimoku Building in downtown Honolulu.³¹² The system generates energy that goes towards the goals set in the HCEI.³¹³

The NORESO contract provides for automated metering, a device for possible benchmarking and retro-commissioning. NORESO included the metering early on, as part of their Energy Conservation Measure summary.³¹⁴ James Kurata, Public Works Administrator at DAGS-PWD, described automated metering as making “data easier to harvest” and that DAGS was looking to automate as much as possible.³¹⁵ The meter functions as a commissioning tool.³¹⁶ According to Mr. Kurata, fluctuations in data could be “an indicator that a problem is going on.”³¹⁷

The NORESO contract was also beneficial because a full-time employee, an energy manager, was included as part of the contract.³¹⁸ This employee monitors the metering systems and other aspects of the energy projects.³¹⁹ If an issue arises, the energy manager provides the first response, according to Mr. Kurata.³²⁰ For example, the manager can go to the trouble site and reset or troubleshoot if an electrical system was

³¹⁰ *Id.*

³¹¹ DBEDT REPORT, *supra* note 168, at 2.

³¹² *NORESOS Adds Innovative Solar Generation System to Energy Savings Performance Contract with the State of Hawai‘i*, NORESO, <http://www.noresco.com/n01042011.html>.

³¹³ *Id.*

³¹⁴ *State Of Hawai‘i DAGS Investment Grade Audit Report*, NORESO, (SECTION C: ECM SUMMARY, p. 1).

³¹⁵ Interview with James K. Kurata, Administrator, Public Works Division, Department of Accounting and General Services, State of Hawai‘i (Apr. 17, 2012).

³¹⁶ *Id.*

³¹⁷ *Id.*

³¹⁸ *Id.*

³¹⁹ *Id.*

³²⁰ *Id.*

running twenty-four hours a day instead of twelve.³²¹ The energy manager can also pinpoint problems faster than those without his expertise.³²²

Mr. Kurata opined that in trying to create a real-time monitoring system of the different agencies' energy consumption, DAGS would "have to coordinate with DBEDT, so the public can see it in one place."³²³ Mr. Kurata's observation underscores the interconnective relationship between DBEDT and the other executive agencies and the importance of DBEDT in implementing Act 96 and Act 155 energy efficiency measures.

HPUC Chair Morita agrees with Mr. Saito about energy performance contracts and their ability to help the state pursue energy goals. She believes the contracts should be viewed as "tools, or methods, of financing."³²⁴ Ms. Morita concurs that such contracts may be used creatively and viewed them as a "win-win" prospect, especially with schools.³²⁵ She cited an example where the Department of Education timed a roof replacement to coincide with a TV installation.³²⁶ Ms. Morita called this type of strategy as getting "bigger bang for the buck."³²⁷ She said that over the last six years the state has gotten more creative and flexible in terms of financing budgets, thanks in part to contracting.³²⁸

Federal assistance also helps alleviate the funding issue. The NORESO photovoltaic system contract was made possible by a \$9.6 million State Energy Efficiency Conservation Block Grant awarded by ARRA on July 10, 2009.³²⁹ Earlier in 2009, ARRA awarded a \$29 million grant to DBEDT for them to implement the HCEI.³³⁰ According to DBEDT Energy Conservation Manager Carilyn Shon, there was "not a lot of funding prior to ARRA"³³¹ and that overall, "in 2009 over \$36.7 million

³²¹ *Id.*

³²² *Id.*

³²³ *Id.*

³²⁴ Telephone interview with Hermina M. Morita, *supra* note 79.

³²⁵ *Id.*

³²⁶ *Id.*

³²⁷ *Id.*

³²⁸ *Id.*

³²⁹ *State Energy Efficiency Conservation Grant*, RECOVERY.GOV (2011), <http://www.recovery.gov/Transparency/RecipientReportedData/pages/RecipientProjectSummary508.aspx?AwardIdSur=31595>.

³³⁰ *ARRA Grant*, RECOVERY.GOV (2009), <http://www.recovery.gov/Transparency/RecipientReportedData/pages/RecipientProjectSummary508.aspx?AwardIdSur=19597>.

³³¹ Interview with Carilyn O. Shon, *supra* note 131.

in ARRA funds were awarded to DBEDT for energy programs. DBEDT used the funds to support HCEI.”³³²

DBEDT uses its money to reach out to the private sector in assisting the attainment of the HCEI targets. Gail Suzuki-Jones runs the Hawai‘i Green Business Program through DBEDT.³³³ This program encourages businesses to voluntarily undergo sustainable energy measures.³³⁴ The program recognizes the business’s efforts after a site visit and review.³³⁵ According to Ms. Suzuki-Jones, over fifty businesses from hotels to smaller shops have joined the program.³³⁶

The initial RPS goals of Act 155 have been met due to the efforts of the state agencies and electric companies involved in the initiative. According to the PUC, all four Hawai‘i electric utilities met the 2010 RPS goals of renewable electrical energy represented ten percent of their electrical energy sales.³³⁷ All four utilities surpassed the goal, with Hawai‘i Electric Light Company, Inc. going well beyond the mark, with 48.1 percent renewable electrical energy.³³⁸ This success suggests that Hawaii’s energy laws are capably achieving the HCEI goals. However, the percentage of RPS increases exponentially over the next three targets, and the definition of RPS will change. Starting January 1, 2015, electrical energy savings from any technology source will no longer be eligible to count towards meeting a utility’s RPS requirements.³³⁹

Overall, the creation of the HCEI/Act 155 goals have been a success in increasing awareness of Hawaii’s energy situation and encouraging participation in pursuing energy efficiency. As Ms. Morita said, the “framework is not perfect, but it helps to have goals, and a common understanding of where we are and where we are going.”³⁴⁰

V. RECOMMENDATIONS

After considering the efforts made by the various agencies in attempting to implement the Act 96 building mandate and to reach the

³³² Email correspondence with Carilyn O. Shon, *supra* note 132.

³³³ Interview with Gail Suzuki-Jones, *supra* note 89.

³³⁴ *Hawai‘i Green Business Program*, HAWAI‘I STATE ENERGY OFFICE, <http://energy.hawaii.gov/programs/achieving-efficiency/green-business-program>.

³³⁵ Interview with Gail Suzuki-Jones, *supra* note 89.

³³⁶ *Id.*

³³⁷ *State of Hawai‘i, Annual Report 2010-2011*, PUBLIC UTILITIES COMMISSION 13 (Nov. 2011) <http://puc.hawaii.gov/reports/puc-annualreports/FY%202011%20HI%20PUC%20Annual%20Report.pdf>.

³³⁸ *Id.* at 14.

³³⁹ *Id.* at 13.

³⁴⁰ Telephone interview with Hermina M. Morita, *supra* note 79.

goals of Act 155, it is recommended that agencies continue to pursue making buildings energy efficient while employing cost-benefit analyses that produce more “bang for the buck.”³⁴¹

Recommendations specifically concerning the Act 96 mandate would be dependent on the outside factors that Ms. Shon and others have mentioned. If the economy, and therefore the availability of funding, improves or if sustainability technology advances dramatically in the near future, the USGBC and Ms. Suzuki-Jones can and should advocate for a new mandate of LEED Gold for public buildings. Along with this advocacy, DBEDT should continue encouraging individual project managers to attempt attaining Gold and Platinum certification, perhaps looking at Mr. Simpson’s success in Washington State as an example. The national USGBC should consider the uniqueness of individual buildings and the different state environments and continue to work with the USGBC Hawai‘i chapter in creating Hawai‘i-specific LEED guidelines.

Recommendations for the pursuit of Act 155 goals also involve economic factors, such as the aforementioned smart use of budgeting. DAGS and other agencies should continue to enter into energy performance contracts with built-in commissioning and retro-commissioning provisions and an energy manager to oversee daily energy consumption. If the governor provides encouragement for such contracts, as Ms. Shon described, that may cause some acrimony but could ultimately result in a lot of savings towards the Act 155 energy efficiency targets. Automated meters and online avenues for document submittal should be encouraged. The proliferation and availability of such devices will reduce the manpower needed to operate some of the processes involved in reaching energy efficiency measures. In addition, automation will increase the ease of monitoring and addressing potential problems.

Finally, DBEDT should continue increasing public awareness of the HCEI and the progress made so far, in an effort to increase the private sector’s involvement in attaining energy efficiency. DAGS may help fulfill this public education goal by completing the creation of a real-time online energy consumption monitor, consolidating the data from all participating agencies for display on the internet. DBEDT should continue to expand Ms. Suzuki-Jones’s Hawai‘i Green Business Program and conduct more outreach programs with businesses and the community.

VI. CONCLUSION

This paper provides a portrait of the current success of Hawai‘i state agencies in pursuing energy efficiency goals set by the state, by observing the legal signals of Hawaii’s green building laws, and measuring what those laws create in real world impacts. The research leads to the conclusion that the green building framework in Hawai‘i is

³⁴¹ *Id.*

solid, and that agencies are making genuine efforts to meet the goals set in Act 155. In seeking to achieve these goals, Hawai'i has the potential to establish itself as a leader and model for the rest of the nation. Further research may be done in the future to analyze the effects of the altered RPS standards in 2015. In addition, the possible costs to various stakeholders created by tax credits and other energy provisions are not explored in this paper. Exploring hidden costs of energy efficiency would be a valuable addition to the legal scholarship and those involved with renewable energy everywhere, because it could reveal obstacles and how to address them that lie in Hawaii's path to energy independence.

APPENDIX A

The entire DAGS-PWD strategy reads as follows:³⁴²

STRATEGY: The previously described projects are part of DAGS' developing long term strategy. For the immediate strategy, the Division of Public Works will implement projects in accordance with Act 96, SLH 2006 "to the extent possible."

PWD's general strategy in defining and applying "to the extent possible" is to take the following steps:

1st level: Look for and implement sustainable design practices and elements that PWD does already, thus no impact on operation/function and cost.

2nd level: Look for and implement sustainable design practices and elements that PWD may not have normally done, but can do without negative impact to cost and negative impact to operation/function of the facility.

3rd level: Look for and possibly implement sustainable design practices and elements that PWD may not currently do that are not very costly and improve operation/function of the facility. Associated costs, benefits, budget and maybe even schedule will start to become factors in deciding whether to implement.

4th level: Look for and possibly implement requirements that PWD may not currently do and will impact cost and will improve operation/function of the facility. Associated costs, benefits, budget and schedule will be factors in deciding whether to implement.

Part of the strategy also includes knowing what not to do:

PWD shouldn't implement sustainable design practices and elements that do not offer any real value. PWD does not want to implement sustainable design requirements to get LEED points just to achieve a rating that does not provide a real value even if the project budget would allow it.

As PWD gains the experience and knowledge from the projects that will occur over the year, PWD intends to develop a LEED or generically stated, Sustainable Design and Commissioning application guideline and programmatic support for PWD and possibly other State agencies.

³⁴² STATE OF HAWAI'I DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM, REPORT TO THE 2011 HAWAI'I STATE LEGISLATURE: LEAD BY EXAMPLE: STATE OF HAWAI'I AGENCIES' ENERGY INITIATIVES FY 2010-2011 42 (2012), available at <http://hawaii.gov/dbedt/main/about/annual/2012-reports/2011-lbe.pdf>.

APPENDIX B

The list of buildings is as follows:³⁴³

LEED Platinum

- NELHA Hawai‘i Gateway Energy Center (completed)
- UH-Hilo Student Life Complex (completed)

LEED Gold

- UH-Hilo Student Life Complex (completed)
- UH Institute of Marine Biology Coconut Island Biology Research Laboratories (design)
- UH Center for Microbial Oceanography Research and Education (complete)
- HSPLS North Kohala Public Library (complete)

LEED Silver

- DAGS CSD Administrative Building (registered)
- DAGS Keaukaha Military Reservation Joint Military Center (under construction)
- DAGS Maui Public Safety Complex (design)
- DOE ‘Ewa Makai Middle School campus (complete)
- DOE Kīhei High School campus (RFP)
- DOE Wailuku Elementary School II (design)
- DOE Baldwin High School Library (under construction)
- DOH Hawai‘i State Hospital new forensic facility (design)
- DOT-Air HNL Bus Maintenance Facility (planned)
- DOT-Air HNL Cargo Facility (planned)
- DOT-Air HNL Commuter Terminal (under design)
- DOT-Air HNL Concourse (under design)
- DOT-Air HNL Consolidated Car Rental Facility (designed)
- DOT-Air HNL Maintenance Facility (planned)
- DOT-Air HNL Mauka Concourse (under design)
- DOT-Air KOA Aircraft Rescue Fire Fighters Building (designed)
- DOT-Air KOA Commuter Terminal (designed)
- HSPLS ‘Aiea Public Library (funded)
- HSPLS Koloa Public Library (sited)
- HSPLS Nānākuli Public Library (planning)
- HSPLS Mānoa Public Library (under construction)
- PSD Kaua‘i Regional Complex (planned)
- PSD Maui Community Correctional Center relocation (stopped)
- PSD O‘ahu Regional Complex (planned)

³⁴³ DBEDT REPORT, *supra* note 168.

- PSD New transitional housing (planned)
- UH Information Technology Center (design)
- UH-Hilo Hawai‘ian Language Building (under construction)
- UH-Hilo Sciences and Technology Center (under construction)
- UH-Hilo Student Services Building addition and renovation (under construction)
- UH-Hilo College of Pharmacy (planning and design)
- UH-Hilo Student Services Building addition and renovation (design)
- UH-Mānoa Campus Center renovation and addition (under construction)
- UH-Mānoa College of Education (planned, pending funds)
- UH-Mānoa Edmonson Hall renovation (funded for design)
- UH-Mānoa Frear Hall Residence Building (completed)
- UH-Mānoa Gartley Hall renovation (design)
- UH-Mānoa Kennedy Performance Arts Facilities (funded for design)
- UH-Mānoa Kuykendall Hall renovation (funded for design)
- UH-Mānoa Pacific Regional Biosafety Laboratory (funded for design and construction)
- UH- Mānoa Performing Arts Facility (design)
- UH-Mānoa School of Law addition and renovation (funded for planning)
- UH-Mānoa new classroom building (planning)
- UH-West O‘ahu new Kapolei campus development (under construction)
- Honolulu Community College Advanced Technology Training Center (funded for design)
- Kapi‘olani Community College Culinary Institute of the Pacific (design)
- Leeward Community College Education and Innovation Instructional Facility (funded for design)
- Maui Community College science facility (under construction)
- Windward Community College Library and Learning Center (under construction)

LEED Certified

- DOE Waipahu Intermediate School Cafeteria (completed)
- UH-Mānoa School of Medicine (completed)
- UH-Hilo ‘Imiloa Astronomy Center of Hawai‘i (completed)
- UH John A. Burns School of Medicine (completed)

LEED Commercial Interiors

- DOT-Air HNL Airport Lounge (completed)

LEED Existing Buildings: Operations and Maintenance

- DAGS Leiopapa A. Kamehameha State Office Tower (ongoing performance period)

APPENDIX C

The complete list of UH projects:³⁴⁴

- UH Mānoa – Campus Center Renovation and Addition currently under construction with goal for LEED Silver.
- UH Mānoa – New Classroom Building currently under planning with goal for LEED Silver.
- UH Mānoa – C-MORE has been completed; and LEED Gold pending USGBC approval.
- UH Mānoa – Cancer Research Center of Hawai‘i currently under construction with a goal for LEED Gold.
- UH Mānoa – Kuykendall Hall Renovation currently under design with goal for LEED Gold.
- UH Mānoa – Snyder Hall Renovation currently under design with goal for LEED Gold.
- UH Mānoa – Webster Hall Translational Health Science Simulation Center currently under design with goal for LEED Silver.
- UH Mānoa – Gartley Hall Renovation funded for design with goal for LEED Silver.
- UH Hilo – Hawai‘ian Language Building currently under construction with goal for LEED Silver.
- UH Hilo – Sciences and Technology Building currently under construction with goal for LEED Silver.
- UH Hilo – Student Services Building Addition and Renovation currently under construction with goal for LEED Silver.
- UH Hilo – College of Pharmacy currently under planning and design with goal for LEED Silver.
- UH Hilo – Living Learning Community Phase 2 currently under planning and design with goal for LEED Silver.
- UH West O‘ahu – New campus development in Kapolei currently under construction with goal for LEED Silver.
- UH Maui CC – Science Facility currently under construction with goal for LEED Silver.
- Kapi‘olani CC – Culinary Institute of the Pacific facilities at the former Cannon Club site along Diamond Head currently under design with the goal of LEED Silver.

³⁴⁴ STATE OF HAWAI‘I DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM, REPORT TO THE 2011 HAWAI‘I STATE LEGISLATURE: LEAD BY EXAMPLE: STATE OF HAWAI‘I AGENCIES’ ENERGY INITIATIVES FY 2010-2011 48 (2012), available at <http://hawaii.gov/dbedt/main/about/annual/2012-reports/2011-lbe.pdf>.

- Leeward CC – Education and Innovation Instructional Facility currently under design with goal for LEED Silver.
- Windward CC – Library and Learning Center facility currently under construction with goal for LEED Silver.
- Honolulu CC – Advanced Technology Training Center currently under design with a goal for LEED Silver.
- Hawai‘i CC – Hale Aloha (3383) pending start construction with goal for LEED Silver.
- Hawai‘i CC – West Hawai‘i new campus development Phase 1, designed with goal for LEED Silver.
- Systemwide – Information Technology Center design completed and RFP pending with goal for LEED Silver.