Sunrise Analysis of a Proposal to Regulate Refrigeration and Air Conditioning Mechanics

A Report to the Governor and the Legislature of the State of Hawai'i

Report No. 94-15
October 1994

THE AUDITOR
STATE OF HAWAI'I

The Office of the Auditor

The missions of the Office of the Auditor are assigned by the Hawaii State Constitution (Article VII, Section 10). The primary mission is to conduct post audits of the transactions, accounts, programs, and performance of public agencies. A supplemental mission is to conduct such other investigations and prepare such additional reports as may be directed by the Legislature.

Under its assigned missions, the office conducts the following types of examinations:

1. *Financial audits* attest to the fairness of the financial statements of agencies. They examine the adequacy of the financial records and accounting and internal controls, and they determine the legality and propriety of expenditures.

2. *Management audits*, which are also referred to as *performance audits*, examine the effectiveness of programs or the efficiency of agencies or both. These audits are also called *program audits*, when they focus on whether programs are attaining the objectives and results expected of them, and *operations audits*, when they examine how well agencies are organized and managed and how efficiently they acquire and utilize resources.

3. *Sunset evaluations* evaluate new professional and occupational licensing programs to determine whether the programs should be terminated, continued, or modified. These evaluations are conducted in accordance with criteria established by statute.

4. *Sunrise analyses* are similar to sunset evaluations, but they apply to proposed rather than existing regulatory programs. Before a new professional and occupational licensing program can be enacted, the statutes require that the measure be analyzed by the Office of the Auditor as to its probable effects.

5. *Health insurance analyses* examine bills that propose to mandate certain health insurance benefits. Such bills cannot be enacted unless they are referred to the Office of the Auditor for an assessment of the social and financial impact of the proposed measure.

6. *Analyses of proposed special funds* and existing *trust and revolving funds* determine if proposals to establish these funds and existing funds meet legislative criteria.

7. *Procurement compliance audits* and other *procurement-related monitoring* assist the Legislature in overseeing government procurement practices.

8. *Fiscal accountability reports* analyze expenditures by the state Department of Education in various areas.

9. *Special studies* respond to requests from both houses of the Legislature. The studies usually address specific problems for which the Legislature is seeking solutions.

Hawaii's laws provide the Auditor with broad powers to examine all books, records, files, papers, and documents and all financial affairs of every agency. The Auditor also has the authority to summon persons to produce records and to question persons under oath. However, the Office of the Auditor exercises no control function, and its authority is limited to reviewing, evaluating, and reporting on its findings and recommendations to the Legislature and the Governor.

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OVERVIEW

THE AUDITOR
STATE OF HAWAII

Sunrise Analysis of a Proposal to Regulate Refrigeration and Air Conditioning Mechanics

Summary

We analyzed whether refrigeration and air conditioning mechanics should be regulated as proposed in House Bill No. 2661 introduced during the 1994 legislative session. We concluded that licensing is not necessary, existing protections are sufficient, and House Bill No. 2661 is flawed.

Refrigeration and air conditioning mechanics or technicians install, maintain, service, and repair refrigeration and air conditioning systems. Refrigeration systems maintain required temperatures to preserve food, medicine, and other perishable products. Air conditioning systems control the temperature, humidity, and air quality in residential, commercial, industrial, and other buildings.

House Bill No. 2661 proposes to regulate the occupation with a seven-member refrigeration and air conditioning mechanics licensing board in the Department of Commerce and Consumer Affairs. Under the proposal, no one can lawfully perform, direct, or supervise refrigeration or air conditioning work unless licensed by the board.

The bill covers only refrigeration appliances with a refrigerant charge of at least five pounds and air conditioning systems whose cooling capacity exceeds 51,000 British thermal units (BTUs) per hour or whose aggregate cubic feet per minute exceeds 2,100. This excludes most residential refrigerators and residential room air conditioning units.

The Sunset Law says that professions and vocations should be regulated only when reasonably necessary to protect the health, safety, and welfare of consumers. In assessing the need for regulation, evidence of abuses is to be given great weight. The law also asks the Auditor to consider whether consumers are at a disadvantage in choosing the provider and the benefits and costs of regulation to taxpayers.

We found that the regulation of refrigeration and air conditioning mechanics is not warranted. There is little evidence that regulation is needed. We found no documented evidence of abuses by refrigeration and air conditioning mechanics; few states regulate them. Proponents of regulation claim that incompetent mechanics could harm the public. They say faulty servicing of air conditioning systems or refrigeration units could result in problems such

as Legionnaires' disease, indoor air pollution, fires, contaminated drinking water, and food spoilage. Upon examination, we found the arguments by proponents to be speculative and not well supported.

We also found that the engineers, contractors, supermarket managers, and others who would be using licensed refrigeration and air conditioning mechanics have the experience and knowledge to protect themselves. They are not disadvantaged consumers who need state regulation to protect them. Furthermore, regulation would be costly and licensing fees could restrict entry into the occupation.

The federal government, state government, and the private sector already provide protections against the kinds of harm identified by proponents of regulating refrigeration and air conditioning mechanics. These include federal programs in environmental protection and state programs in health, fire protection, and contractor licensing. In the private sector, union apprenticeship training, various educational programs, and private certification provide additional protection.

In addition, we found that House Bill No. 2661 has several deficiencies. Its definitions are confusing. Also, licensure requirements are unreasonably restrictive. Applicants must have at last five years of full-time experience, but not less than 10,000 work hours, as an apprentice or helper. This restricts qualified persons from entering the profession.

Recommendation and Response

The Legislature should not enact House Bill No. 2661.

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A Report to the
Governor
and the
Legislature of
the State of
Hawaii

Submitted by

THE AUDITOR
STATE OF HAWAII

Report No. 94-15
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Foreword

The Sunset Law, or the Hawaii Regulatory Licensing Reform Act of 1977, contains a sunrise provision which requires that measures proposing to regulate professions or vocations be referred to the State Auditor for analysis prior to enactment. The Auditor is responsible for reporting the results of the analysis to the Legislature.

This report evaluates the regulation of refrigeration and air conditioning mechanics as proposed in House Bill No. 2661, introduced in the Regular Session of 1994. The Legislature requested this study in Senate Concurrent Resolution No. 68, House Draft 1 of the session. The study presents our findings on whether the proposed regulation complies with policies in the Sunset Law and whether there is a reasonable need to regulate refrigeration and air conditioning mechanics to protect the health, safety, and welfare of the public. It concludes with our recommendation on whether the proposed regulation should be enacted.

We acknowledge the cooperation of the Department of Commerce and Consumer Affairs, other state officials, and organizations and individuals knowledgeable about the occupation whom we contacted during the course of our analysis.

Marion M. Higa
State Auditor

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Chapter 1
Introduction

The Sunset Law, or the Hawaii Regulatory Licensing Reform Act (Chapter 26H, Hawaii Revised Statutes), contains a sunrise provision requiring that measures proposing to regulate professions or vocations be referred to the State Auditor for analysis prior to enactment. The Auditor is to determine whether regulation is necessary to protect the health, safety, and welfare of consumers.

This report evaluates whether the regulation of refrigeration and air conditioning mechanics proposed in House Bill No. 2661, introduced in the Regular Session of 1994, complies with policies for occupational regulation in the Sunset Law. The Legislature requested this study in Senate Concurrent Resolution No. 68, H.D. 1 of the 1994 session.

Background on Refrigeration and Air Conditioning Mechanics

Refrigeration and air conditioning mechanics or technicians install, maintain, service, and repair refrigeration and air conditioning systems. Refrigeration systems maintain required temperatures to preserve food, medicine, and other perishable products. Air conditioning systems control the temperature, humidity, and air quality in residential, commercial, industrial, and other buildings. These systems are made up of many mechanical, electrical, and electronic components including motors, compressors, pumps, fans, ducts, pipes, thermostats, and switches.

Refrigeration and air conditioning mechanics follow blueprints, design specifications, and manufacturers' instructions in installing motors, compressors, condensing units, evaporators, and other components. They connect equipment to duct work, refrigerant lines, and the electrical power source. Mechanics also charge the system with refrigerant and check its proper operation. They diagnose and repair equipment breakdowns. They maintain systems by replacing filters and vacuuming cleaning vents, ducts, and other parts of the system.

Mechanics learn the trade from trade or technical schools, junior or community colleges, or apprenticeship training programs. A union-management committee of the Plumbers and Fitters Local 675, AFL-CIO, and the Plumbing and Mechanical Contractors Association of Hawaii administers the apprenticeship program in the state.

In Hawaii, most refrigeration and air conditioning mechanics are members of Local 675. An estimated 350 to 400 mechanics belong to

the union. Accurate data is not available on the number of mechanics who do not belong to the union, but we estimate there could be a couple of hundred or so.

Refrigeration and air conditioning mechanics work for cooling contractors, service and repair shops, hospitals, office buildings, and other organizations that operate large refrigeration and air conditioning systems. A few mechanics are self employed.

Proposal to Regulate Refrigeration and Air Conditioning Mechanics

House Bill No. 2661 would establish a refrigeration and air conditioning mechanics licensing board in the Department of Commerce and Consumer Affairs. Under the proposal, no one can lawfully perform, direct, or supervise refrigeration or air conditioning work unless licensed by the board.

House Bill No. 2661 covers only air conditioning systems whose cooling capacity exceeds 51,000 British thermal units (BTUs) per hour or whose aggregate cubic feet per minute exceeds 2,100. The bill exempts apprentices or trainees learning the trade and persons who work only as licensed motor vehicle repair personnel under Chapter 437B, HRS. It also exempts persons working only on refrigeration appliances with a refrigerant charge of less than five pounds. The bill prohibits a licensed mechanic from supervising more than one apprentice or trainee concurrently.

The seven-member board would consist of four licensed refrigeration and air conditioning mechanics and three private citizens not connected to the industry. Among its duties, the board would be responsible for developing license examinations. Qualifications for licensure would include having five years of full-time experience or its equivalent, but not less than 10,000 work hours, as a refrigeration and air conditioning mechanic's helper or apprentice; and passing the board's examination with a score of not less than 70 percent accuracy.

The board may deny, revoke, or suspend licenses, and may seek court injunctions against unlicensed activity. Those violating the licensing law may be fined up to $500 for a first offense and up to $1,000 and imprisoned for up to one year for each subsequent offense.

Objectives of the Analysis

The objectives for this analysis were to:

1. Determine whether there is a reasonable need to regulate the occupation to protect the health, safety, and welfare of the public.

2. Make recommendations based on our findings.

Scope and Methodology

To accomplish these objectives, we reviewed the literature on refrigeration and air conditioning mechanics and their regulation. We reviewed complaints and other information to identify any harm to the public.

We obtained information from organizations representing refrigeration and air conditioning mechanics. We interviewed representatives of the occupation, the Plumbers and Fitters Local 675, the construction industry, and staff of the Department of Commerce and Consumer Affairs, the Department of Health, the Department of Labor and Industrial Relations, and the Honolulu Fire Department. We also contacted other states' licensing agencies, the federal Environmental Protection Agency, and the federal Occupational Safety and Health Administration.

Our work was performed from June 1994 through August 1994 in accordance with generally accepted government auditing standards.

Chapter 2

Findings and Recommendation

This chapter presents our findings and recommendation on the need to regulate refrigeration and air conditioning mechanics. We conclude that licensing is not necessary, existing protections are sufficient, and House Bill No. 2661, which proposes licensing, is flawed.

Summary of Findings

1. The regulation of refrigeration and air conditioning mechanics is not warranted. We found no documented evidence that they harm consumers, and the costs of regulation would be substantial.

2. Other protections against harm exist in both the public and private sectors.

3. The bill is flawed. Its definitions are confusing and licensure requirements are restrictive.

Regulation of Refrigeration and Air Conditioning Mechanics Is Not Warranted

The Sunset Law says that professions and vocations should be regulated only when reasonably necessary to protect the health, safety, and welfare of consumers. In assessing the need for regulation, evidence of abuses is to be given great weight. The law also asks the Auditor to consider whether consumers are at a disadvantage in choosing the provider and to consider the benefits and costs of regulation to taxpayers.

There is little evidence that regulation is needed. We found no evidence of abuses by refrigeration and air conditioning mechanics. Few states regulate them. We also found that the businesses that use refrigeration and air conditioning mechanics are not at a disadvantage. In addition, the projected costs of instituting regulation are considerable.

No documented evidence of harm

We found no documented evidence that refrigeration and air conditioning mechanics have caused harm to the public's safety, health, or welfare.

Proponents of regulation claim that an incompetent mechanic could harm the public in many ways. They contend that faulty servicing and maintenance of air conditioning systems could foster Legionnaires' disease, spread indoor air pollutants, cause and spread fires, and contaminate drinking water. They further argue that poorly serviced refrigeration units could cause food spoilage, making consumers ill.

Finally, proponents say that mechanics could negligently release refrigerants containing chlorofluorocarbons into the air, damaging the ozone layer and the world's future. We found these arguments to be speculative and not well supported.

Legionnaires' disease is harmful—sometimes fatal—and has been traced to air conditioning cooling towers. But we found no documented evidence that incompetent mechanics have caused the disease. Factors that contribute to the growth of the legionella bacteria and the spread of the disease include locating the cooling tower too close to air ducts, the absence of good drift eliminators to reduce the amount of spray leaving the cooling tower, the lack of monthly inspections for slime and algae growth, and most important, the lack of automatic and continuous chemical treatment of cooling tower water.

The above factors are controlled not by the mechanic but by others. The designer of the air conditioning system determines the location of the cooling tower and the use of drift eliminators. The building owner controls monthly inspections and the chemical treatments performed by qualified chemical companies. Refrigeration and air conditioning mechanics do not and are not qualified to test for the presence of legionella or to determine the chemicals needed for effective treatment of cooling tower water.

We also found no documented evidence that mechanics have caused poor indoor air quality including the "sick building" syndrome. Proponents of regulation say an incompetent mechanic might cut off outside air to improve cooling without realizing the impact on indoor air quality. But more significant determinants of indoor air quality are the presence of pollutants (such as dry cleaning chemicals, new carpets, disinfectants, or strong perfume), the design of the air conditioning system (including proper filters, appropriate vent locations, and efficient air paths), and the arrangement of interior space (partitions and interior walls installed after placement of the air conditioning system). The Department of Health has logged 12 complaints of poor indoor air quality since March 1993; most were resolved when the building owner installed a new air conditioning system or added equipment such as air filters.

The claim by proponents of regulation that fires are caused and spread by improper servicing and maintenance of air conditioners is not supported by evidence. Proponents say an incompetent mechanic may cause a short circuit and fire by improper wiring. They also say a mechanic may disable a fire detector, with the result that the air conditioner fails to shut down and the fan escalates the fire and circulates smoke throughout the building. They claim the mechanic may carelessly handle refrigerants, which are highly flammable and toxic.

However, none of the four to six fires per year that the Honolulu Fire Department has linked to refrigeration and air conditioning systems was associated with refrigerants. Short circuits caused the majority of the fires, but the department could not say whether the fires resulted from faulty maintenance or mechanical failure. The department also could not say that any of these fires were escalated because an air conditioning system failed to shut off.

Proponents of regulation also contend that chemically treated air conditioning water will contaminate drinking water if a mechanic bypasses or disables the "backflow preventer," the device used to prevent air conditioning water from flowing into the drinking water supply. They claim that mechanics sometimes bypass the backflow preventer to speed the pumping of water into the air conditioning system. They say a bypass allowed air conditioning water to contaminate the drinking water at a local elementary school in 1986.

However, we found no documented evidence that any mechanic has contaminated drinking water by bypassing a backflow preventer. In the 1986 elementary school incident, the Safe Drinking Water Branch of the Department of Health discovered a bypass but could not determine who inserted it. Generally, the department holds building owners responsible for periodically inspecting and testing the operations of backflow preventers and removing any bypasses.

We also found no documented evidence of food spoilage due to inadequate servicing and repair of refrigeration units by mechanics. The Sanitation Branch and the Food and Drug Branch of the Department of Health, which inspect commercial refrigeration units at establishments where food is stored, reported no complaints that faulty servicing of refrigeration units has caused spoilage.

Finally, proponents of regulation charge that mechanics could release refrigerants that contain chlorofluorocarbons into the atmosphere. However, federal regulations are being developed to prevent such harm, including the phasing out of chlorofluorocarbon refrigerants.

The Professional and Vocational Licensing Division, Office of Consumer Protection, and Regulated Industries Complaints Office (all in the Department of Commerce and Consumer Affairs, or DCCA), the Better Business Bureau, and the state Ombudsman reported no complaints against refrigeration and air conditioning mechanics.

Few states license

Only 9 states license refrigeration and air conditioning mechanics: Connecticut, Kansas, Maryland, Massachusetts, New Mexico, Ohio, Oklahoma, Rhode Island, and Virginia. The states we contacted had

little evidence that regulating refrigeration and air conditioning mechanics has provided greater protection to the public.

Consumers not disadvantaged

The proposed regulation does not focus on the disadvantaged consumer who may need protection due to a lack of expertise. Instead, it focuses on those who are not at a disadvantage: engineers, contractors, supermarket managers, restaurant establishments, and apartment managers or associations. These parties have the experience and technical knowledge to protect themselves. It is not necessary for the State to institute regulation to protect them.

House Bill No. 2661 covers only refrigeration appliances with a refrigerant charge of at least five pounds and air conditioning systems with a cooling capacity in excess of 51,000 British thermal units (BTUs) per hour or whose aggregate cubic feet per minute exceeds 2,100. This excludes most residential refrigerators and residential room air conditioning units.

Considerable cost of regulation

Regulation would be costly. Under the Sunset Law, the proposed regulation of refrigeration and air conditioning mechanics should be avoided because its benefits to consumers are outweighed by its cost to taxpayers and because it unreasonably restricts entry into the occupation by all qualified persons.

DCCA informed us that one year prior to commencement of the regulatory program, it would need general fund support up to $132,000 to start up the program and prepare for implementation.

DCCA estimates that it would need $87,000 a year to regulate refrigeration and air conditioning mechanics under House Bill No. 2661. For the first year, another $45,000 would be needed to develop an examination unless a valid and reliable national examination could be found. These figures assume that 600 mechanics would need to be licensed. DCCA also assumes that an unknown number of apprentices/ trainees/helpers would have to be registered.

Subsequently, DCCA would establish fees designed to recover the $87,000 a year in program costs. Section 26-9(1), HRS authorizes DCCA to assess fees on applicants and licensees so long as the fees bear a reasonable relationship to the cost of services provided. Assuming there would be 600 new licensees in the first year and 80 license applicants in each subsequent year, DCCA estimates that in the first biennium of the program, a licensure fee of $256 per person would be needed. In addition, a separate assessment up to $110 per person would be required to support the Compliance Resolution Fund. In the second

biennium of the program, with an increasingly large pool of licensees to support the program, the license fee is estimated to be $215, plus the Compliance Resolution Fund assessment. (These figures do not include additional fees for taking the licensing examination. However, they also do not reflect potential revenue from registering apprentices/trainees/ helpers, which could reduce the license fees.)

We believe the State should not allocate its scarce resources to establish regulation of an occupation that poses so little harm. Moreover, charging fees to licensees to cover the State's costs could restrict entry into the occupation, especially when added to the impending costs of being certified in refrigerants under federal EPA requirements as described in the following section.

Other Protections Are in Place

We find that both the public and private sectors already provide protections against the kinds of harm identified by proponents of regulating refrigeration and air conditioning mechanics. The federal government, state government, and the private sector all have programs to protect the public. Moreover, the federal government is considering additional regulations for public protection.

Federal protection

Regulations of the federal Environmental Protection Agency (EPA) prohibit individuals from knowingly releasing ozone-depleting refrigerants (chlorofluorocarbons) into the atmosphere while servicing, maintaining, or repairing air conditioning and refrigeration equipment. The EPA also requires that refrigerant recycling and recovery equipment meet EPA certification requirements.

As further protection against ozone depletion, the EPA requires chlorofluorocarbon refrigerants to be phased out by January 1, 1996. To protect the public from the mishandling of refrigerants, EPA regulations, effective November 14, 1994, will require all persons who service equipment containing refrigerants to be certified and will restrict the sale of refrigerants to certified technicians only.

The federal Occupational Safety and Health Administration (OSHA) has proposed regulations to protect the public from the health effects of poor indoor air quality. The regulations would require employers to establish an indoor air quality compliance program. The program covers building systems components that directly affect indoor air quality. It requires designating a compliance officer to coordinate or supervise building maintenance activities, training maintenance workers, performing and recording inspections and maintenance, and recording all indoor air quality complaints.

State protection

A number of state requirements help to ensure adequate and healthful design, construction, installation, and operation of air conditioning systems. Under Chapter 39, Title 11, of its rules, the Department of Health reviews blueprints and specifications to insure that designs meet national standards for ventilation and construction meets national fire prevention standards. The department then issues a permit to install and operate the air conditioning system. A state-licensed engineer is responsible for proper design, installation, and initial operation. The owner of the building must operate the system to provide proper air quality or face criminal charges and permit revocation. The department has inspection authority.

Under Section 132-9, HRS, of the state fire protection law, the county fire chief must approve the plans and specifications before construction begins.

Additional protection against faulty workmanship is provided by Chapter 444, HRS, the contractors licensing law. It states that only licensed contractors may install, alter, improve, or repair any building, project, development, or any part of these if the contract price exceeds $1,000. This includes air conditioning systems. The Department of Commerce and Consumer Affairs licenses specialty contractors in refrigeration (classification C-40) and in ventilating and air conditioning (classification C-52).

Under Act 234 of 1994, the Department of Health has responsibility for an indoor air pollution program. The department is to establish and coordinate a government-wide network of state agencies and managers of publicly owned buildings to identify, assess, and correct indoor air pollution problems. The department will also provide information and educational material about indoor air pollution to managers, owners, and occupants of publicly owned and non-publicly owned buildings. The department may also set up a program for approving and inspecting construction of ventilation systems and for monitoring their proper maintenance.

To protect against harm caused by a bypass to a backflow preventer, Section 11-21-8 of the Department of Health's rules requires building owners or authorized agents to remove any arrangement to bypass a backflow prevention device. If the bypass is not removed, water service may be terminated and fines imposed on the building owner. The department has the authority to inspect building premises for bypasses.

The Department of Health also protects the public from food spoilage caused by defective refrigeration units. The Sanitation Branch inspects food service establishments (restaurants and any other establishment where food is served to the public) to ensure adequate temperatures in refrigeration units. The Food and Drug Branch inspects refrigeration

units at food establishments (such as supermarkets, grocery stores, packaging plants) for correct operations. The department penalizes establishments for noncompliance with the rules.

Private sector protection

The Joint Apprentice & Training Committee (made up of representatives of the Plumbing and Mechanical Contractors Association of Hawaii and the Plumbers and Fitters Local 675) offers an apprenticeship training program in refrigeration and air conditioning equipment operation. The apprenticeship program began in 1962 and has been approved by the Department of Labor and Industrial Relations.

The apprenticeship program helps ensure that union refrigeration and air conditioning mechanics are adequately trained, and that they are supervised by experienced mechanics during their training. Since most refrigeration and air conditioning mechanics in Hawaii are union members, the public is protected.

The program requires apprentices to complete 10,000 hours of on-the-job training, including 1,500 to 6,000 hours in preventive maintenance, troubleshooting, and field repairs; 1,500 to 6,000 hours in system equipment installation; 500 to 3,000 hours in pipefitting and prefabrication; and 300 to 2,000 hours in general shopwork. Apprentices also spend 1,080 hours in the classroom. Journeymen supervise the apprentices while they gain experience. The program takes five years to complete.

In addition to the training program, the collective bargaining agreement between the contractors and Local 675 offers other protections. Individuals registering with the union describe the type of work sought and their qualifications. Contractor requests for mechanics specify any special skills required for the particular job. The union then dispatches the registrants who have the necessary qualifications. The contractor may terminate any employee who does not meet the specified qualifications in the request.

The Honolulu Community College and the New York Technical Institute also provide training in refrigeration and air conditioning. The Honolulu Community College offers a two-year program consisting of 69 credit hours, which is equivalent to 2,000 contact hours. Graduates receive an associate of science degree in refrigeration and air conditioning. The New York Technical Institute offers a six-month training program that combines 750 classroom hours with 750 hands-on lab work hours.

In addition, several national organizations affiliated with refrigeration and air conditioning mechanics provide certification testing for the

occupation. They are the Air-Conditioning & Refrigeration Institute (ARI), the Refrigerating Engineers Technicians Association (RETA), and the Refrigeration Service Engineers Society (RSES).

Furthermore, under the doctrine of master-servant, employers may be legally liable for damages and for violations of safety standards by mechanics whom they employ. Since they can be held responsible for the actions of incompetent refrigeration and air conditioning mechanics, it is in their interest to ensure that their refrigeration and air conditioning mechanics are qualified.

Finally, engineers, building owners, and operators may also be legally liable for damages and for not meeting national standards for indoor air quality. Primary causes of action include breach of contract and express warranties, breach of quiet enjoyment and habitability, negligence, and strict product liability.

House Bill No. 2661 Is Flawed

The bill has several deficiencies. Its definitions are confusing and requirements for licensure are unreasonably restrictive.

The definition of refrigeration and air conditioning mechanic is confusing. It excludes persons who work on electrical wiring on air conditioning or refrigeration systems. Mechanics, however, state that 80 percent of their work is electrical work. Thus the bill appears to exclude all mechanics from licensing, which cannot have been the intent.

The definition of a refrigeration and air conditioning apprentice or trainee is also unclear. The bill exempts an apprentice or trainee who is "learning the trade" from licensing, but the term "learning the trade" is not defined. Furthermore, although it limits a licensed mechanic to supervising no more than one apprentice or trainee concurrently, the bill does not *require* apprentices to work under supervision. Therefore, because apprentices are exempt, the bill appears to allow apprentices to work unsupervised without being licensed.

The bill also restricts qualified persons from entering the profession. To qualify for licensure, a person must have at least five years of full-time experience, but not less than 10,000 work hours, as an apprentice or helper. However, mechanics have been graduating from far shorter training programs and working unsupervised without problems. These include graduates of the Honolulu Community College's two-year program and the New York Technical Institute's six-month program. Yet under House Bill No. 2661, these persons would not be eligible to sit for the licensing examination.

Recommendation

The Legislature should not enact House Bill No. 2661.

Response of the Affected Agency

Comments on Agency Response

We transmitted a draft of this report to the Department of Commerce and Consumer Affairs on September 13, 1994. A copy of the transmittal letter is included as Attachment 1. The department did not submit a response.

ATTACHMENT 1

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September 13, 1994

COPY

The Honorable Clifford K. Higa
Director
Department of Commerce & Consumer Affairs
1010 Richards Street
Honolulu, Hawaii 96813

Dear Mr. Higa:

Enclosed for your information are three copies, numbered 6 to 8 of our draft report, *Sunrise Analysis of a Proposal to Regulate Refrigeration and Air Conditioning Mechanics.* We ask that you telephone us by September 16, 1994, on whether or not you intend to comment on our recommendations. If you wish your comments to be included in the report, please submit them no later than September 27, 1994.

The Governor and presiding officers of the two houses of the Legislature have also been provided copies of this draft report.

Since this report is not in final form and changes may be made to it, access to the report should be restricted to those assisting you in preparing your response. Public release of the report will be made solely by our office and only after the report is published in its final form.

Sincerely,

Marion M. Higa
State Auditor

Enclosures