HB

358

HOUSE COMMITTEE REPORT

(5)
Date Referred: January 31, 1990 — FURTHER REFERRALS: FINANCE

Date of Committee Action: 2/6/90

The COMMUNITY & REGIONAL AFFAIRS Committee considered: SSHB 358

SSHB 358
"An Act establishing minimum thermal and lighting energy standards applicable to residential buildings that are constructed or purchased with state financial assistance, and excluding commercial and industrial buildings from the class of buildings to which state thermal and lighting standards apply; and providing for an effective date."

RECOMMENDATIONS:
[ ] be replaced with CSSS 358 [X] the same title [ ] a new title
[ ] have attached amendment(s)
[X] do pass
[ ] do not pass
[ ] no recommendation
[ ] individual recommendations
[ ] additional referral to the ______ Committee

ADOPTS: ______ letter of intent

ATTACHES NEW FISCAL NOTE(s): (Dept)
[ ] fiscal impact ______
[ ] zero fiscal note X
[ ] zero with analysis ______

APPROVES PREVIOUS: (Date/Dept)
[ ] fiscal note(s) ______
[ ] zero fiscal note(s) ______
[ ] zero fn/analysis ______

SIGNING DO PASS:

Eugene D. Kubina
Richard Foster

SIGNING:
(Check approp. column)

	Do Not Pass	No Rec	Amend
Chris Davis		✓	

Richard Foster
Chairman's Signature

Original sponsor(s): REP. BROWN, M.Davis, MacLean, Hudson, Koponen, Goll

IN THE HOUSE BY THE C&RA COMMITTEE

CS FOR SPONSOR SUBSTITUTE FOR HOUSE BILL NO. 358 (C&RA)

IN THE LEGISLATURE OF THE STATE OF ALASKA

SIXTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act establishing minimum thermal and lighting energy standards applicable to residential buildings that are constructed or purchased with state financial assistance, and excluding commercial and industrial buildings from the class of buildings to which state thermal and lighting standards apply; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 18.56.090 is amended to read:

Sec. 18.56.090. GENERAL POWERS. In addition to other powers granted in this chapter, the corporation may, for the purpose of providing housing for persons of lower and moderate income or persons located in remote, underdeveloped, or blighted areas of the state and for its other corporate purposes,

(1) [REPEALED

(2)] make or participate in the making of mortgage loans to sponsors, developers, builders, and purchasers of residential housing, if the corporation determines that

(A) mortgage loans are not otherwise available, wholly or in part, from private lenders upon reasonably equivalent terms and conditions; and

(B) the residential housing for which the mortgage loans are made complies with applicable provisions of AS 18.56.096(c) and the applicable thermal and lighting energy standards

of AS 46.11.040;

(2) [(3)] purchase or participate in the purchase of mortgage loans made to sponsors, developers, builders, owners, and purchasers of residential housing, if the corporation

(A) has given approval before the initial making of the loan and has determined that mortgage loans were, at the time the approval was given, not otherwise available, wholly or in part, from private lenders upon reasonably equivalent terms and conditions, or

(B) has determined that

(i) the purchase or participation will result in additional residential housing, taking into account without limitation such factors as reinvestment of the proceeds of the sale in additional mortgage loans, increased availability of mortgage loans insured by the federal government, its agencies or departments, the reduction, if any, of interest payments to be made with respect to mortgage loans, or such other factors as will tend to increase or improve the supply of residential housing within the state; and

(ii) the residential housing covered by the mortgage loan complies with applicable provisions of AS 18.56.096(c) and the applicable thermal and lighting energy standards of AS 46.11.040;

(3) [(4)] make partial rental payments and mortgage interest payments under a contract with any housing owner if the payments will be applied to decrease rental or mortgage interest charges of persons of lower and moderate income or owners or purchasers of residential housing in remote, underdeveloped, or blighted areas of the state;

(4) [(5)] make loans from the housing development fund;

(5) [(6)] collect and pay reasonable fees and charges in connection with making, purchasing, and servicing its mortgages, loans, notes, bonds, certificates, commitments, and other evidences of indebtedness;

(6) [(7)] acquire real property, or any interest in real property, in its own name, by purchase, transfer, or foreclosure, when the acquisition is necessary or appropriate to protect any loan in which the corporation has an interest; sell, transfer, and convey the property to a buyer; and, if the sale, transfer, or conveyance cannot be effected with reasonable promptness or at a reasonable price, rent or lease the property to a tenant pending the sale, transfer, or conveyance;

(7) [(8)] sell, at public or private sale, to any purchaser, including the Federal National Mortgage Association, all or any part of a mortgage or other instrument or document securing a construction, land development, mortgage, or temporary loan of any type permitted by this chapter;

(8) [(9)] purchase, in order to meet the requirements of the sale of its mortgages to the Federal National Mortgage Association, stock of the Federal National Mortgage Association;

(9) [(10)] procure insurance against any loss in connection with its operation;

(10) [(11)] consent to the modification of the rate of interest, time of payment of any installment of principal or interest, or any other terms, of the mortgage loan, mortgage loan commitment, construction loan, temporary loan, contract, or agreement of any kind to which the corporation is a party;

(11) [(12)] borrow money as provided in this chapter to

carry out and effectuate its corporate purposes; and issue its obligations as evidence of borrowing;

(12) [(13)] include in any borrowing the amounts necessary to pay financing charges, interest on the obligations for a period not exceeding one year after the date on which the corporation estimates funds will otherwise be available to pay the interest, consultant, advisory and legal fees, and other expenses that are necessary or incident to this borrowing;

(13) [(14)] under AS 13.56.088, adopt and publish regulations respecting its lending programs and other regulations that are necessary to effectuate its purposes;

(14) [(15)] provide technical and advisory services to sponsors, builders, and developers of residential housing and to residents of it;

(15) [(16)] promote research and development in scientific methods of constructing low-cost and energy-efficient residential housing of high durability;

(16) [(17)] make and execute agreements, contracts, and other instruments necessary or convenient in the exercise of the powers and functions of the corporation under this chapter, including contracts with any person, firm, corporation, governmental agency, or other entity;

(17) [(18)] receive, administer, and comply with the conditions and requirements respecting any appropriation or gift, grant, or donation of property or money;

(18) [(19)] sue and be sued in its own name;

(19) [(20)] adopt an official seal;

(20) [(21)] adopt bylaws for the regulation of its affairs and the conduct of its business and adopt regulations and policies in

connection with the performance of its functions and duties;

(21) [(22)] employ fiscal consultants, engineers, attorneys, real estate counselors, appraisers, and other consultants and employees that may be required in the judgment of the corporation, and fix and pay their compensation from funds available to the corporation;

(22) [(23)] do all acts and things necessary, convenient, or desirable to carry out the powers expressly granted or necessarily implied in this chapter;

(23) [(24)] invest or reinvest, subject to its contracts with noteholders and bondholders, any money or funds held by the corporation in any obligations or other securities or investments in which banks or trust companies in the state may legally invest funds held in reserves or sinking funds or any funds not required for immediate disbursement, and in certificates of deposit or time deposits secured by obligations of, or guaranteed by, the state or the United States;

(24) [(25) REPEALED

(26) REPEALED

(27) REPEALED

(28)] purchase a mortgage loan made to refinance an existing mortgage loan, without regard to whether the corporation holds the existing mortgage loan, as long as the interest rate and fees charged to the borrower are sufficient to fully reimburse the corporation for all costs incurred by the corporation in purchasing the mortgage loan and as long as the borrower will be in compliance with AS 18.56.096(a)(6) after purchase of the mortgage loan by the corporation.

* Sec. 2. AS 18.56.096 is amended by adding a new subsection to read:

(c) The corporation may not make, participate in the making of, purchase, or participate in the purchase of a residential building if construction of the building begins after December 31, 1990, unless

the building complies with the thermal and lighting energy standards required by AS 46.11.040. The corporation

(1) may adopt regulations to implement this subsection; and

(2) shall, by regulation, establish

(A) procedures by which the person responsible for the construction of the building may demonstrate that the building complies with the thermal and lighting energy standards, including

(i) self-certification, if the contractor responsible for the building construction provides satisfactory evidence that the contractor has completed a training program of the Alaska Craftsman Home Program and the training program is satisfactory to the commissioner of community and regional affairs;

(ii) submission of the certificate of a registered architect, registered engineer, or a building inspector, and the architect, engineer, or building inspector has completed a training program of the Alaska Craftsman Home Program and the training program is satisfactory to the commissioner of community and regional affairs;

(iii) submission of the certificate of occupancy issued by the municipality in which the building is located, if the certificate is issued by a municipality in which the municipal building code meets or exceeds the thermal and lighting energy standards, as determined by the commissioner of community and regional affairs;

(iv) another method approved by the commissioner of community and regional affairs in regulations adopted by the commissioner after consultation with the executive

director of the corporation; and

(B) criteria by which the energy conservation standards may be met; for purposes of this subparagraph, the residential building complies with the energy standards if the residence has received a rating under the rating system developed by Energy Rated Homes of Alaska if, in the judgment of the commissioner of community and regional affairs, the rating meets or exceeds the thermal energy standards required by AS 46.11.040.

* Sec. 3. AS 18.56.105 is amended to read:

Sec. 18.56.105. ALLOCATION OF LENDING ACTIVITIES. The corporation shall designate regions within the state which in the aggregate, encompass the entire state. In participating in the making or purchasing of loans under AS 18.56.090(1) and (2) [AS 18.56.090(2) AND (3)] or under AS 18.56.100, the corporation shall make its money available through the private financial institutions in the state within each region designated by the corporation under this section. The corporation shall allocate its money among the regions on the basis of recent and future anticipated lending activity as well as the potential need for the loans in each region and may reallocate its money among the regions as it considers appropriate to reflect changes in lending activity or need in the regions.

* Sec. 4. AS 18.56.110(g) is amended to read:

(g) Notwithstanding AS 18.56.090(1) [AS 18.56.090(2)] and (a) of this section, the corporation may not issue bonds in any 12-month period beginning after June 30, 1983, in an amount that exceeds the amount of bonds authorized to be issued during the preceding period, unless a different amount is authorized by the legislature. This subsection does not apply to the issuance by the corporation of refunding bonds or to the issuance by the corporation of bonds the

proceeds of which are intended to be used to refinance mortgage loans held by the corporation.

* Sec. 5. Section 1, ch. 83, SLA 1980, is amended to read:

Section 1. DECLARATION OF POLICY. It is the policy of the state to encourage and facilitate the implementation of energy conservation measures relating to in-state energy use. This policy shall be implemented by

(1) the state setting an example of wise and efficient energy use, by designing and managing public buildings and their energy systems to meet appropriate standards for energy efficiency;

(2) providing incentives for the design and modification of residential [COMMERCIAL, AND INDUSTRIAL] buildings to accomplish maximum energy efficiency; and

(3) establishing mandatory energy efficiency standards for buildings purchased or constructed with state financial assistance.

* Sec. 6. AS 46.11.040 is amended to read:

Sec. 46.11.040. APPLICABILITY OF THERMAL AND LIGHTING ENERGY STANDARDS TO <u>RESIDENTIAL</u> [PRIVATE] BUILDINGS. State financial assistance may not be approved or granted for the construction <u>or purchase</u> of a [NEW] residential [OR COMMERCIAL] building if construction of the building begins after December 31, <u>1990</u> [1980], unless

(1) the building is in compliance with thermal and lighting energy standards;

(2) the building is in compliance with the building code of a municipality and the <u>standards for thermal and lighting energy of the</u> municipal building code <u>meet</u> [MEETS] or <u>exceed</u> [EXCEEDS] the thermal and lighting energy standards;

(3) the building

(A) is constructed under an exception to the municipal

building code granted because the exception will result in increased energy efficiency; or

(B) is located or is to be located in an area where thermal and lighting energy standards are not justified because of the high cost of implementation of the standards, as determined under regulations adopted by the commissioner of community and regional affairs; or

(4) the applicant agrees, in writing, that the building will be brought into compliance with thermal and lighting energy standards within one year of conveyance.

* Sec. 7. AS 46.11.900 is amended to read:

Sec. 46.11.900. DEFINITIONS. In this chapter

(1) "alternative energy system"

(A) means a source of thermal, mechanical, or electrical energy that [WHICH] is not dependent on oil or gas or a nuclear fuel for the supply of energy for space heating and cooling, refrigeration and cold storage, electrical power, mechanical power, or the heating of water;

(B) includes

(i) an alternative energy property as defined by [SEC. 48(l)(3)(A) OF THE INTERNAL REVENUE CODE (] 26 U.S.C. 48(l)(3)(A) [)]; and

(ii) a method of architectural design and construction that [WHICH] provides for the collection, storage, and use of direct radiation from the sun; [AND

(iii) REPEALED]

(2) "department" means the Department of Commerce and Economic Development;

(3) "energy audit" means a determination and written

summary prepared under 42 U.S.C. 3216(b) [42 U.S.C. 3216(b)(1)(A), (SEC. 215, P.L. 95-619, NATIONAL ENERGY CONSERVATION POLICY ACT)] of

(A) the energy consumption characteristics of a building, including the size, type, and rate of energy consumption of major energy consuming systems of the building and the climate characterizing the region where the building is located; and

(B) the energy conservation and cost savings likely to result from appropriate energy-conserving maintenance and operating procedures and modifications, including the purchase and installation of energy-related fixtures; for purposes of this subparagraph when a fossil fuel is the energy source, the energy cost savings shall be determined with reference to the projected price of that fossil fuel over a 10-year period;

(4) "financial institution" means a bank, trust company, savings bank, savings and loan association, or credit union;

(5) "life-cycle cost" means the total cost of owning, operating, and maintaining a building over its useful life, including its energy and fuel costs, determined on a basis of a systematic evaluation and comparison of alternative building systems, except that in the case of leased buildings the life-cycle cost shall be calculated over the effective remaining term of the lease;

(6) ["NEW BUILDING" MEANS A BUILDING THE CONSTRUCTION OF WHICH BEGINS AFTER DECEMBER 31, 1980;

(7)] "public building" means a building owned or controlled and held by the state for government or public use;

(7) [(8)] "state financial assistance" means a loan, grant, guarantee, insurance, payment, rebate, subsidy, or other form of state assistance other than aid under AS 05.35.010 - 05.35.070, AS 14.11.-100 - 14.11.135, and AS 29.60, including the purchase by a state

agency of a loan to finance the construction or purchase of a [NEW] residential [, COMMERCIAL, OR INDUSTRIAL] building;

(8) [(9)] "thermal and lighting energy standards" means the thermal and lighting energy standards

(A) established by the American Society of Heating, Refrigeration, and Air Conditioning Engineers as revised

(i) [(A)] by the commissioner of transportation and public facilities under AS 44.42.020(a) for public facilities; or

(ii) [(B)] by the commissioner of community and regional affairs for buildings and structures that are not public facilities; or

(B) developed in regulations adopted

(i) by the commissioner of transportation and public facilities under AS 44.42.020(a) for public facilities; or

(ii) by the commissioner of community and regional affairs for buildings and structures that are not public facilities.

* Sec. 8. APPLICATION OF THERMAL AND LIGHTING ENERGY STANDARDS TO PROGRAMS FOR RESIDENTIAL HOUSING THAT IS CONSTRUCTED OR PURCHASED WITH STATE FINANCIAL ASSISTANCE. Persons responsible for administration and management of programs in which state assistance is provided for the purchase or construction of residential buildings are encouraged to adopt and enforce the compliance standards and methods of AS 18.56.096(c)(2), added by sec. 2 of this Act, within the housing programs for which they are responsible.

* Sec. 9. This Act takes effect immediately under AS 01.10.070(c).

STEVE COWPER, GOVERNOR

DEPT. OF COMMUNITY & REGIONAL AFFAIRS

OFFICE OF THE COMMISSIONER

P.O. BOX B
JUNEAU, ALASKA 99811-2100
PHONE: (907) 465-4700

949 E. 36TH AVENUE, SUITE 400
ANCHORAGE, ALASKA 99508-4302
PHONE: (907) 563-1073

August 24, 1989

POSITION PAPER

RE: House Bill 358 - "An Act relating to thermal and lighting standards applicable to residential, commercial, and industrial buildings ..."

SPONSORS: Representatives Brown and M. Davis

Program Effects of Bill

House Bill 358 proposes to amend statutes that mandate the development of state thermal and lighting standards for new residential, commercial and industrial buildings constructed or purchased with state financial assistance. The bill corrects the language of the existing statutes that Alaska Superior Court has ruled restricts the application of the standard to only the construction of buildings. Under this restrictive interpretation, the standard applies to a small minority of rural housing assistance loans and exempts Alaska Housing Finance Corporation and urban areas of the state. As a rule state financial assistance for homes only covers the purchase of the home by the consumer and not the construction by the builder.

AS 6.11.040, AS 46.11.900(8), and AS 46.11.900(9) are amended to include financial assistance for the purchase of new buildings as well as construction.

AS 46.11.040 is also amended to include new industrial buildings in the standard's coverage.

Comments

The Department strongly supports this bill because it corrects existing statutory language preventing the application of the standard to state financed new homes.

Energy is a critical concern in housing for all Alaskans. The cost of energy is usually one of the largest costs in terms of homeownership. A study by the Rural Alaska Community Action Program reported that in eight rural villages 16 to 37 percent of families' incomes were spent on energy, and 68 percent of Alaskans' energy bills are spent on staying warm.

Too often in the past, homes have been constructed that are not appropriate to the state's climate. While this is true statewide it is particularly true in rural Alaska where the 1988 Alaska Rural Housing Needs Assessment reported that an appalling 28 percent of rural homes could not maintain an inside temper ture of 70 degrees Fahrenheit. This problem is not solely in rural Alaska. During this past winter's cold snap, homeowners across the state experienced problems keeping their homes warm.

An energy standard is one of the most important factors in assuring energy efficiency in new homes. Most homebuyers are not involved in construction decisions about the homes in which they will live and for which they pay the heating bills. In addition, many important energy features are difficult and not economical to add later.

The research conducted by the University of Alaska's Institute of Social and Economic Research and the Department of Community and Regional Affairs estimates that a home built to the state's standard will reduce heating bills by an average of 37 percent statewide over a home built to current practice. For a village in the Interior, for example, a home built to the state's standard would cost an estimated $2,363 in additional construction and labor costs over a home built to HUD's minimum standard, but would cost $568 less to heat in the first year and over a 30 year period would save an estimated $9,453. This would have a simple payback in terms of energy savings of four years. It is estimated that if all of the 190 HUD homes that are to be built this year were constructed to the state standard it would reduce the heating bills of the low income families living in them by $94,000 annually. The standard is economical for the urban portions of the state as well. A recent analysis completed by the Institute of Social and Economic Research found that in Anchorage installing R-3 windows over R-2 are as lucrative to the homeowner as an investment in stocks or bonds paying 16.7 percent.

The Alaska Legislature recognized this in 1980 when they mandated the development of a residential thermal standard and stated that any state financed construction must meet the standard.

STATE OF ALASKA
1990 LEGISLATIVE SESSION

BILL VERSION: SS HB 358
PUBLISH DATE: _____

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: "An Act..thermal & lighting energy standards..."
Sponsor: Reps Brown, M.Davis, MacLean, etc
Requestor: _____

Agency Affected: Community & Regional Affairs
BRU: _____
Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME	-0-	-0-	-0-	-0-	-0-	-0-
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

There is no fiscal effect for FY 90.

Prepared by: Jim Pearson
Division: Municipal & Regional Assistance
Phone: 465-4750
Date: 2/2/90

Approved by Commissioner: Jerry L. Adkins
Agency: Community & Regional Affairs
Date: 2/2/90

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

Kay Brown

Alaska State Legislature
House of Representatives

TO: Representative Eileen MacLean, Chair
Community and Regional Affairs Committee

FROM: Representative Kay Brown

DATE: February 2, 1990

SUBJ: SS HB 358 - Minimum Thermal Energy Standards

Thank you for so promptly scheduling SS HB 358, legislation that would require future new housing built with state financial assistance after December 31, 1990 to meet at least minimum energy efficiency standards.

The Need for Minimum Thermal Energy Standards

The arguments in support of minimum standards are compelling:

- A survey of eight rural villages found that 16 to 37% of family income is spent on energy while a 1988 "Alaska Rural Housing Needs Assessment" found that 36% of rural homes could not maintain an indoor temperature of 70 degrees during the cold winter months.

- An audit of 714 HUD housing units concluded that "projects are being developed that are infeasible, improperly designed, and inadequately constructed" noting that many of the the rural housing units being constructed were generally unsuited for the harsh Alaskan environment (in some homes interior walls were sheathed in ice during the winter).

- The State of Alaska is the financier (and now owner through AHFC) of thousands of repossessed residential properties. Due to poor building practices these REOs have required substantial funds to repair and upgrade simply to make them marketable.

- Typical home buyers do not have -- nor can they reasonably be expected to have -- the kind of technical expertise necessary to determine whether

P. O. Box 20-2661
Anchorage, AK 99520-2661
(907) 272-0207

During Session
P. O. Box V
Juneau, AK 99811
(907) 465-4998

a home has been built to reasonable energy efficiency standards.

- Finally, it is far more costly (and in some cases physically impossible) to "retrofit" a home once the basic structure is complete. Unless attention is given to energy efficiency at the time of initial design and construction, significant cost-effective energy efficiency opportunities will be irretrievably lost.

A point worth emphasizing is that under HB 358 the state minimum thermal standards would apply only to future new homes built with state financial assistance.

Legislative History of the Alaska Thermal Energy Standard

In 1980, the Alaska Legislature enacted Chapter 83 SLA 1980, legislation that provided for the development and adoption of minimum thermal and lighting standards (AS 46.11.010 -.900). The 1980 legislation was enacted to ensure that new structures built with "state financial assistance" would meet minimum energy efficiency standards. Between 1983 and 1988, the Department of Community and Regional Affairs (DCRA) worked with a broad cross-section of interests (builders, consumer groups, etc.) to develop a standard for new state-financed residential construction. After literally years of effort, DCRA adopted a proposed standard that was to be implemented last October. However, just prior to the Standard becoming effective last fall a lawsuit was filed that took advantage of a drafting technicality in the original 1980 law.

Briefly, the 1980 law provides that "state financial assistance may not be approved for the construction of a new residential or commercial building" unless the building is in compliance with applicable state energy standards (AS 46.11.040). The plaintiffs argued for a narrow, literal reading of the law -- that the statute should limit the prohibition of state financial assistance to direct construction lending only.

Although the original 1980 legislation had a "Declaration of Policy" section clearly stating the Legislature's intent to establish "mandatory energy efficiency standards for buildings purchased or constructed with state financial assistance" (emphasis added), the language actually codified into law only referenced financing "for the construction of" new structures. The effect of the Superior Court ruling -- limiting the applicability of the Standard to direct construction lending -- renders the current statute almost meaningless since only a small portion of state financial assistance takes the form of direct construction lending. Pending appeal to the Alaska Supreme Court, implementation of the Standard has been enjoined.

After the Superior Court halted implementation of the Standard last spring, HB 358 was introduced to reaffirm the clear legislative objective of requiring that new homes financed through AHFC meet at least minimum thermal standards.

Sponsor Substitute for HB 358

As you know, HB 358 was introduced at the very end of last session. During the interim I worked on the bill and developed a Sponsor Substitute that is now before the committee. Briefly, SS HB 358:

1) explicitly reaffirms the original 1980 intent of the legislature that minimum thermal standards apply to homes constructed as well as financed through AHFC with state financial assistance;

2) makes it clear that the thermal standards are intended to apply only to future new homes built with state-financial assistance homes (i.e., construction starting after December 31, 1990);

3) explicitly identifies several alternative means by which builders can demonstrate compliance with the standard, including self-certification; and

4) deletes commercial and industrial buildings from the scope of applicability.

Assuming HB 358 passes the legislature this session, the Department of Community and Regional Affairs would take the proposed minimum thermal standard out for what I hope will be the final round of public hearings and comment. If any legitimate technical concerns are identified at that time, appropriate changes can be made.

Finally, nearly all states have some form of minimum standard. It is ironic that, Alaska -- the state with the most extreme cold-weather temperatures and the highest heating costs in the nation -- is without even minimum energy efficiency requirements. Although it can be anticipated that there will always be a certain faction of builders who object to even minimum requirements, it should be noted that a significant number of Alaska homebuilders already construct homes that meet or exceed the proposed state minimum.

For your reference, I have attached the following materials:

- a Sectional Analysis of SS HB 358;

- a listing of the homebuilders, utilities, housing professionals, local governments, labor groups, non-profits, other organizations and

individuals that support the need for HB 358 and minimum thermal energy standards;

- excerpts from letters and testimony from builders and other housing professionals in support of HB 358 and minimum thermal energy standards;

- a "Question and Answers" briefing paper on HB 358 and the issue of thermal energy standards; and

- a collection of various news articles and excerpts from housing reports documenting the need for minimum thermal energy standards.

I look forward to the hearing on Tuesday. If you have any questions concerning HB 358, please let me know or contact Eric Myers of my staff at 465-4998.

attachments

2/2/90
Rep. Kay Brown

SECTIONAL ANALYSIS

SS HB 358 - Minimum Thermal Energy Standards

Section 1. Amends the existing "General Powers" provisions (AS 18.56.090) of the Alaska Housing Finance Corporation (AHFC) to clarify that new homes financed with AHFC mortgage loans must comply with minimum thermal standards.

Section 2. Amends current AHFC statutes (AS 18.56.096) to provide that the corporation may not finance new homes constructed after December 31, 1990 unless the building meets minimum thermal energy standards.

Specific means are identified by which builders can demonstrate compliance with the minimum thermal standard. Alternatives are provided, including:

- self-certification, provided the contractor provides evidence of having completed the Alaska Craftsman Home Program;
- an engineer's, architect's or building inspector's certification that the standard has been met, provided the person making this certification has completed the Alaska Craftsman Home Program;
- where a local government has an equivalent or higher thermal standard within their code, a copy of the Certificate of Occupancy stating compliance with the local code;
- a showing that the home has received a "four star plus" rating from Energy Rated Homes of Alaska; or
- another method approved by the Commissioner of the Department of Community and Regional Affairs in consultation with the Executive Director of AHFC.

Section 3. Technical correction; conforming amendment resulting from the numbering changes in Section 1.

Section 4. Technical correction; conforming amendment resulting from the numbering changes in Section 1.

Section 5. Amendment to the original Declaration of Policy section to delete "commercial and industrial" buildings.

Section 6. Amendment to existing law (AS 46.11.040) to clarify that "state financial assistance" includes the purchase of new homes (i.e., home mortgages financed by AHFC) constructed after December 31, 1990. Clarification of existing language to provide that a building is considered to be in compliance with the state standard if it complies with a local building code that is at least equivalent to the state minimum thermal energy standard.

Section 7. Amends the definitions section applicable to the chapter. Changes are made to reflect proper citations for the federal tax code and referenced federal law. Because "new building" is defined in context (see Section 2), the existing, separate definition is repealed as redundant. Clarification of the statutory authority of the Department of Community and Regional Affairs to develop the thermal standards for new residential homes built with state financial assistance and for the Department of Transportation and Public Facilities in the case of public facilities.

Section 8. State housing programs other than those administered by AHFC are directed to adopt the compliance methods identified in Section 2.

Section 9. Immediate effective date.

2/3/90
Rep. Kay Brown

HB 358 - Minimum Thermal Energy Standards
Endorsements and Statements of Support

Alaska Center for the Environment
Alaska Community Development Corporation (Anchorage)
Alaska Federation of Natives
Alaska Health Project
Alaska Housing Finance Corporation
Alaska Housing Policy Development Committee
Alaska Public Interest Research Group
Alaska Rural Electric Cooperative Association
Alaska State AFL-CIO
Alaska State Employees Association
Alaska Village Electric Cooperative
Alaska Wilderness Alliance
Alaska Wildlife Alliance
Alaska Window (Fairbanks)
Alaska Chapter Sierra Club
Analysis North/Alaska Utility Consumer Advocate
Anchorage League of Women Voters
American Lung Association of Alaska
Anchorage Daily News
Anchorage Neighborhood Housing Services, Inc.
Anchorage Recycling Center
Architects Bisset/Simansko (Anchorage)
Arctic Technical Services (Fairbanks)
Barrow Utilities and Electric Cooperative
Brandywine Homeowners Association (Eagle River)
Cedar Park Condominium Association (Anchorage)
Chugach Electric Association (Anchorage)
City of White Mountain
City of Brevig Mission
City of Nome
City of Koyuk
City of Shishmaref
City and Borough of Sitka
Denali Citizens Council
Dick Mueller Realty, Inc. (Kenai)
Dinyee Village Corporation (Stevens Village)
Dory and Associates (Nome)
Ester Construction (Fairbanks)
Fairbanks North Star Borough
Golden Valley Electric Association (Fairbanks)

Greenpeace USA
Kotzebue Electric Association
Heat Loss Analysis, Inc. (Anchorage)
Home Energy Service (Juneau)
Kachemak Bay Conservation Society
Kodiak Island Mayors League
Low-Income Weatherization Policy Advisory Committee
McGlothlin Balivet Co. - Architects & Planners (Anchorage)
National Audubon Society
North Slope Borough
North and Northwest Alaska Mayors Conference
Nushagak Electric Co-operative, Inc. (Dillingham)
Older Alaskans Commission
Older Persons Action Group, Inc.
Raj Bhargava Associates/Enginering in Alaska (Anchorage)
Rotecki, Bill (Ketchikan)
Rural Alaska Community Action Program
Second Annual Rural Energy Conference Resolution
S.I.H. Inc. Weatherization (Fairbanks)
Southwest Alaska Municipal Conference
State of Alaska Energy Policy Task Force
Thermo-Kool of Alaska, Inc. (Anchorage)
Thompson, David (Fairbanks)
Tlingit & Haida Regional Electrical Authority
Trustees for Alaska
U.S. Department of Housing and Urban Development
Western Alaska Building and Construction Trades Council

2/2/90
Rep. Kay Brown

BUILDER AND HOUSING PROFESSIONAL COMMENT IN SUPPORT OF HB 358 - MINIMUM THERMAL ENERGY STANDARDS

AHFC has been committed to the development of energy standards for new construction. Staff members have been working with DCRA from the very outset. We served on the Advisory Committee which assisted in the development of the recommended standards.... We believe the standards are a necessity to help ensure a better housing stock for Alaskans as well as provide homeowners with the potential for lower fuel bills.

Tom Behan, Executive Director
Alaska Housing Finance Corporation

The Alaska State Legislature should enact legislation to restore clear legal authority for the implementation of appropriate minimum thermal standards, based on regional differences, for newly constructed state-financed housing.

Housing Policy Development Committee
Alaska Housing Market Council

At Anchorage Neighborhood Housing Services we have had many occasions to inspect housing units as part of our requirements for lending and in conjunction with our construction assistance programs. There exists a great need for improvement to minimum thermal standards in most of the existing housing stock in Anchorage.

Cynthia A. Parker, Executive Director
Anchorage Neighborhood Housing Services, Inc.

As a builder of energy efficient homes in the Fairbanks area for many years which without exception exceed the State Energy Standard, I feel that [HB 358] will tend to put conscientious Alaskan builders on an even playing field with the fly-by-night contractors from outside who don't know how to build in this environment and, in some cases, don't care.

Mike Musick
Ester Construction
Ester, Alaska

As a builder, I am intimately familiar with what it takes to build appropriately for the Alaska climate. I know we can do better for the people of Alaska than we have in the past.... My own building practices meet or exceed the State minimum energy standard. Other builders should be doing the same.

Ralph W. Brodin, Owner
EE/CC General Contractors
Girdwood, Alaska

During the past two years I have built several homes in the Homer area that meet or exceed HB 358's energy standards. I counsel every one that I build for that an energy efficient house is not only healthy and comfortable but also a good investment because of energy savings.

David Ellington
Ellington Construction
Homer, Alaska

As the American Institute of Architects/Alaska Chapter representative on the Advisory Committee for the [state standard] I was impressed by the participation of all Alaska building industry's sectors.... [The standards] are reasonable and reflect logical and climatic conditions for each region of the State.... Too often builders have sought short term practices through the use of inadequate building practices at the expense of long term operation and maintenance costs.

Robert Balivet, AIA
McGlothlin Balivet Co. - Architects & Planners
Anchorage, Alaska

I am an architectural designer and have been involved in the design and construction of several homes that exceed the minimum energy standards. I am very knowledgeable about the building science and practices that ensure a comfortable, healthy, and energy efficient home. I am also aware of the very slow pace in which the building trades adopt new methods and materials... In order to improve the comfort and quality levels of our housing stock, we simply need HB 358.

James A. Dory
Dory and Associates
Nome, Alaska

As a building official of a major Southeast Alaska community, I have been involved with the entire public development of the standards .... [The standards] are technically sound, reasonable in their scope and practical in their nature and application.

Harry Chartier, Building Official
City and Borough of Sitka

[T]he minimum insulation requirements between the proposed State of Alaska "Energy Standard" for gas heated dwellings in [the] Anchorage area and HUD's MPS [Minimum Property Standards] are nearly identical. The major differences between the two is the state proposes to quantify acceptable infiltration losses and ventilation requirements. We believe that this is a positive step in establishing building performance criteria.

Arlene Patton
U.S. Housing and Urban Development
Anchorage Office - Region X

[T]here must be some inducement to encourage builders to maintain certain standards since businesses tend to stay with the old easy less expensive methods. We are just finishing a new home built to meet or exceed ACHP [Alaska Craftsman Home Program] specs which are more stringent than the proposed State standards.

David T. Thompson
Fairbanks, Alaska

The lack of thermal standards in the past provides the Low-Income Weatherization Program here in the Fairbanks North Star Borough with a seemingly endless supply of rapidly deteriorating high-energy-use dwellings...in need of so much more than the [weatherization] program can provide that the measures often become a band-aid approach to a terminal wound.... There is no reasonable excuse to perpetuate the supply of inadequately constructed buildings.

Robert Maxwell
S.I.H., Inc. - Weatherization
Fairbanks, Alaska

The average homebuyer knows very little, if anything, about energy efficient home design.... Yet they will live in these homes and pay the bills for them ever after.... In our design practices we always strive to meet or exceed the State minimum energy standard. Other architects should be doing the same.

Ronald Bisset and Andrew Simasko
Architects Bissett/Simansko
Palmer, Alaska

I view this legislation [HB 358] as critical to the future of our states building industry in that it will enable Alaska residents to finally receive thermal value in housing that is appropriate to the diverse climate zones of our great state. As a member of the National Association of Home Builders (NAHB) I am aware of attempts by many of our members to stall implementation of these standards and wish to clarify that there is not in any way a consensus to this effect.

Philip Louden
Arctic Technical Services
Fairbanks, Alaska

As a four year member of the Alaska Home Builders Association, I would like you to know that I support the Thermal Standards as written and their original intent. One of the reasons I especially liked the original implementation of the Alaska State Thermal Standards is they were not mandatory [and only apply to housing using] Alaska public funds.

C.R. Deer
Alaska Window
Fairbanks, Alaska

Even though the standards will eventually help the construction trades, the industry is taking a short-term viewpoint by delaying implementation... [further delay] is really unnecessary and only focuses on special interest groups who voice objections... Once again, Alaska is lagging behind the nation in implementing a rational energy policy.

Raj Bhargava, MSME
Raj Bhargava Associates - Engineering in Alaska

2/2/90
Rep. Kay Brown

QUESTIONS AND ANSWERS
SS HB 358 - Minimum Energy Standards

Why is a minimum thermal energy standard needed in Alaska?

Energy consumes a substantial fraction of Alaska family income. A survey of eight rural villages found that 16 to 37% of family income is spent on energy while a 1988 "Alaska Rural Housing Needs Assessment" found that 36% of rural homes could not maintain an indoor temperature of 70 degrees during the cold winter months. A recent audit of 714 HUD housing units concluded that "projects are being developed that are infeasible, improperly designed, and inadequately constructed." The audit found that in some homes interior walls were sheathed in ice during the winter.

Apart from lower monthly energy costs to individual consumers, the state also has a substantial equity interest in the quality of state-financed housing. Inadequate insulation or an improperly installed vapor barrier can result in severe structural damage. Substantial funds have been required to repair and upgrade state repossessed homes just to make them marketable for resale. The state's equity investment in future homes would be better protected with minimum standards to ensure quality construction.

Finally, most homebuyers don't have the kind of expertise and technical knowledge to properly evaluate the quality of a building when purchasing a new home. For many people a new home is the single most significant investment a person will make. A thermal energy standard will help ensure these homebuyers will receive at least a minimum quality of construction.

Do other states have minimum thermal energy standards?

Yes. In fact, nearly all states have some form of minimum thermal energy standard according to the most recent survey by National Conference of States on Building Codes and Standards (1989).

Would SS HB 358 require that all Alaska homes be built to the state minimum standard?

No. Only new homes developed with state financial assistance constructed after December 31, 1990 would be required to meet the state minimum thermal standard. Homes built "out of pocket" or financed without state funding would not be subject to the state standard.

Can Alaska builders meet the proposed state minimum thermal standard and still be competitive in the market?

Yes. A significant number of Alaska builders already meet the proposed state minimum standard. Moreover, there are 70 new homes statewide (a substantial fraction of total new housing starts) being developed to meet the much higher standards of the Alaska Craftsman Home Program (ACHP). Builders from various regions of the state have expressed support for HB 358 and the proposed state minimum standard. Adoption of a minimum state thermal standard would have the effect of putting builders on an "even playing field."

To put the proposed state minimum standard into perspective, for Anchorage gas-heated homes, the minimum insulation requirements under the proposed state standard are nearly identical to HUD's Minimum Property Standards (MPS). Significantly higher insulation levels are called for in the most recently published industry recommended standard published by the American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE, March 1989 - 90.2P).

Would meeting the minimum standard increase the cost of new homes?

A number of builders already meet or exceed the proposed state minimum; implementation of the standard would have essentially no impact on these builders. Other builders not presently meeting the standard would experience a slight increase in construction costs.

The incremental costs to meet the standard have been carefully evaluated and independent private sector cost estimating firms were used during the formulation of the standard. In general, those builders that are not already meeting the minimum standard could experience a 3 - 5 % increase in costs compared to "typical" construction practices during the "boom" real estate years of the early 1980s. For a typical 1,320 square foot Anchorage gas-heated house, incremental costs would be approximately $1,000 to $1,350.

Is the proposed state thermal standard cost-effective?

Yes. A recently updated economic analysis showed that even in Anchorage with relatively low-cost natural gas a home built to the proposed minimum standard showed energy cost savings substantially in excess of added costs. Based on a representative 1,320 square foot home, this analysis evaluated the homeowner cash flow (incremental costs vs. energy savings) to determine the economic merit of the conservation measures. Because interest paid on a home mortgage is tax deductible and utility payments are not, the after tax present value (i.e., cost) of the mortgage payments is only $1,033 and the overall net positive value (i.e., net cost savings) to the homeowner is $611, an extraordinary investment value by any measure.

Is energy efficiency recognized in the Alaska housing market?

Yes. The best demonstration of demand for energy efficient housing is provided by the fact that approximately 70 new Alaska Craftsman homes, are currently under development. These homes are extremely energy efficient, far exceeding the proposed state minimum standard, providing solid evidence of market demand for energy efficient housing stock.

Evidence of consumers recognizing a "resale premium" for energy efficient homes comes from a recent survey of AHFC home sales prepared by the Institute for Social and Economic Research (ISER 1988). Controlling for the houses' age, size, features and location, this study evaluated the sale price differences between homes heated with electricity vs. natural gas. The study found that the lower cost gas homes sold for about 15% more than comparable electric homes, indicating that the Alaska marketplace is well aware of energy efficiency and utility costs as a factor in homebuying.

Finally, there is also indirect evidence of a "resale premium" for energy efficient homes from a 1988 Canadian market survey of several matched pairs of Canadian energy efficient R2000 homes. This study found that the R2000 homes commanded a resale premium of about $5,000 (4.6%) on an average price of $108,000 (LeBlanc & Associates).

Are there financial incentives to encourage the construction of energy efficient homes?

Yes. In fact, the major Alaska lending institutions have developed a financing program that specifically rewards the purchasers of energy efficient homes. In recognition of the lower monthly utility costs associated with energy efficient homes, the Alaska Housing Finance Corporation (AHFC), the Federal National Mortgage Association (Fannie Mae), the Federal Home Mortgage Corporation (Freddie Mac), VA, FHA and the DCRA Housing Assistance Loan Program will all qualify a homebuyer for higher mortgages than would otherwise be possible.

Through the Energy Rated Homes of Alaska (ERHA) progr[illegible]aders will allow a homebuyer to qualify for a higher loan by increasing [illegible]able debt-to-income ratio in recognition of lower monthly utility costs. Under the ERHA program the buyer of an energy efficient house will qualify for an additional 1-2% on his/her debt-to-income ratio (i.e., increased from 28% to 29-30%). With a $4,000 income, this means a home buyer would qualify to borrow an additional $4,800 - $9,400 above the amount allowed for less efficient homes. The proposed state minimum thermal standard is equivalent to a "4 star plus" ERHA rating and will qualify homebuyers for the larger mortgage. Thus, by buying an energy efficient

home, the homeowner can "afford more home" with the same income and also lower monthly utility costs.

In addition, the Department of Community and Regional Affairs has provided incentive demonstration grants to builders to encourage the construction of energy efficient homes. Most recently, the department has developed a special loan "buy down" program to encourage the construction of homes to meet the state standard.

Are indoor air quality concerns addressed by the proposed state standard?

Yes. The indoor air quality issue was specifically addressed during development of the proposed state standard. A technical advisory committee was established which included representatives from the American Lung Association, local government building officials, private sector building professionals and representatives of the homebuilding industry. As a result of the advisory committee work, a consensus proposal was recommended by the committee and adopted by DCRA calling for a minimum ventilation standard of 0.5 air-changes-per-hour (ACH) to assure indoor air quality. By way of comparison, the proposed state ventilation standard of 0.5 ACH calls for somewhat more ventilation than the industry developed standard of 0.35 ACH recommended by the American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE). Moreover, because there are presently no specific ventilation requirements for new homes under present state law, adoption of the proposed state standard, which specifically addresses ventilation concerns, will help ensure that future homes have adequate supplies of fresh air.

Both the American Lung Association of Alaska and the Alaska Health Project, organizations specializing in occupational and environmental air quality concerns, have expressed support for the proposed state standard.

How would the standard be implemented?

SS HB 358 identifies several specific alternative options for builders to show compliance with the standard:

- Contractor self-certification, including proof that the contractor has completed the Alaska Craftsman Home Program training program or its equivalent;

- Showing that the home had received a "four star plus" rating from Energy Rated Homes of Alaska;

- In a community where the local government has a building inspection process which embodies the standard within their code, a copy of the Certificate of Occupancy stating compliance with the code; or

- An engineer's, architect's or building inspector's certification that the standard has been met, provided the person making this certification has completed the Alaska Craftsman training program or its equivalent; or

How does the proposed state minimum thermal standard compare to the Alaska Craftsman Home Program (ACHP)?

In contrast to the state standard, which was developed as a minimum standard, the Alaska Craftsman Program has developed energy standards which are much higher, optimum Alaska standards. Fundamentally, the ACHP provides education and technical assistance in the area of energy efficient design and building.

Is the proposed state thermal standard flexible?

The proposed minimum thermal standard is "regionalized" to recognize the different climatic conditions around the state. The standard also assures flexibility for the builder by allowing a choice among any of three different ways to meet the minimum standard:

Prescriptive Method - the easiest method of all, this method identifies certain mandatory design measures and minimum insulation levels.

Performance Method - this method allows the designer to "trade off" certain requirements against one another (e.g., window area vs. insulation in the walls).

Building Bu Method - total design flexibility is provided to a builder using this method within a total "heat loss budget" (BTUs lost per square foot).

State statute also provides for waivers in the event that a specific measure can be shown to be not cost-effective (AS 46.11.040).

Is there public support for an Alaska minimum thermal energy standard?

A broad cross-section of builders, industry professionals, utilities, consumer groups, unions, non-profits, local governments and individuals have all expressed support for Alaska minimum thermal energy standards.

Has the building industry been involved in the development of the proposed state minimum thermal energy standard?

Yes, extensively. Dating back to 1983, representatives of the homebuilding industry have been directly involved in the development of the proposed standard. An advisory committee was established that included representatives of the Alaska State Homebuilders Association (ASHBA), the Alaska Mortgage Bankers Association and the Alaska Association of General Contractors. The advisory

committee reviewed every phase of the research and analysis during development of the standard. Throughout the standards development the Building Industry Association of Anchorage (BIAA), the Anchorage chapter of the ASHBA, was provided the opportunity to comment on technical issues. Numerous specific compromises and changes were made at the request of the building industry. In October of 1986, BIAA representatives met with then-DCRA Commissioner Emil Notti and indicated that, although certain members of the organization would likely dissent, the BIAA could accept the proposed standard. As predicted at the time, certain builders remain opposed to the idea of a minimum standard.

Why was the state minimum energy standard enjoined by the Court?

Just prior to the proposed state standard became effective a lawsuit was filed that took advantage of a drafting technicality in the original 1980 law. That original 1980 law mandates that "state financial assistance may not be approved for the construction of a new residential or commercial building" unless the building is in compliance with applicable state energy standards (AS 46.11.040).

The plaintiffs argued for a narrow, literal reading of the law -- that the statute should limit the prohibition of state financial assistance to direct construction lending only. Limiting the applicability of the Standard to construction lending renders the standard almost meaningless since virtually no state financing involves direct construction lending.

Even though the original 1980 legislation had a "Declaration of Policy" section clearly stating the Legislature's intent to establish "mandatory energy efficiency standards for buildings purchased or constructed with state financial assistance" (emphasis added), the language actually codified into law only references financing "for the construction of" new structures. The lawsuit successfully exploited this drafting oversight in the Superior Court.

SS HB 358 was introduced to reaffirm the Legislature's clear intent in 1980 to have a minimum thermal standard apply to all new homes purchased or constructed with state financial assistance.

Anchorage Daily News
Thursday, September 14, 1989

Report says federal housing for Alaska Natives is a mess

By GEORGE FROST
Daily News reporter

A federal housing program for Alaska Natives is riddled with waste, and many of the homes built since 1975 are unsafe, substandard and ill-suited to harsh arctic conditions, according to a study released Tuesday by a federal housing inspector.

The program, administered by the Department of Housing and Urban Development, is so poorly run that it must be considered a failure, said Rich Nygaard, regional inspector general for the Department of Housing and Urban Development.

"Despite more than 14 years experience, HUD has not provided Alaska Natives with decent, safe or affordable housing. Design and construction defects, deferred maintenance and poor housekeeping continues to create safety and health hazards for Alaska families," he said.

Local HUD officials disagreed strenuously with many of the audit findings.

"We feel the audit report is completely flawed and does not cover what they said they were covering," said Arlene Patten, acting HUD manager of the Anchorage office. "It is based on a false premise and a misunderstanding of the program."

Patten said the audit focused on projects built in the late 1970s and early 1980s startup phase of the program and "does not show the substantial improvements."

"Since then, most of these things have been corrected and the homes are no longer substandard," she said.

"I think the program is trying to meet the need of the regional Bush people of Alaska, and without that program there would be no housing out there for them."

More than $300 million has been spent to build 3,290 single-family homes under the Alaska Mutual Help Home Ownership Program.

Please see Back Page, HOMES

Continued from Page A-1

The Alaska program, part of a nationwide Indian housing system, gives low-income Native families an opportunity to purchase their own homes. They pay whatever they can afford, and HUD makes the remainder of the loan payments.

Of all the homes built since 1975, more than six of every 10 have been either the subject of a lawsuit because of poor construction or have required extra HUD funding to correct those problems, according to the detailed, 141-page report.

An inspection of 207 of the 714 newer homes built since 1984 showed that almost all had serious problems. All 207 had defective foundations, Many of the homes rest on primitive pads that are unsuited for the fragile tundra, subject to summertime floods and fierce winter storms.

Fifty-seven had broken or deficient furnaces, stoves and other mechanical systems.

"In some projects, home and basic sanitary maintenance was quite limited and others nonexistent," the study said.

A series of inspections in villages throughout the Bush turned up numerous safety hazards: broken stairs and porches, tottering foundations, and electrical hazards from improperly installed lighting fixtures, the audit said.

Some families use Coleman camping stoves to cook their meals because their regular stoves are broken or they can't afford propane cylinders that fuel them. Others burn creosote-soaked driftwood for heating, another potential hazard.

Nine of 50 homeowners in one village reported that cracks in the flooring of their homes allowed winds to "enter with such force that it raises the vinyl flooring off the floor, creating an effect like walking on pillows."

And in wintertime, interior walls are sheathed in up to 4 inches of ice, the audit found.

HUD contracts with 13 different Indian Housing Authorities, most of them subdivisions of local government or Native corporations and agencies, to run the program.

William Nishamura, regional HUD administrator for Alaska, disagreed that a majority of homes are substandard. The audit ignored the complexities of building in the Arctic, he said. Building standards and materials are not yet perfected for Alaska.

Nishamura laid blame for many of the problems at the door of the Native housing agencies. Building sites are chosen by the Native agencies, which also provide the soils engineers, architects, planners and builders, he said.

A majority of problems cited in the report are caused by poor maintenance, not poor design or construction. And it is the responsibility of Native housing agencies to train homebuyers how to maintain their furnaces, stoves and foundations, not HUD's, he said.

John Guinn, executive director of a Bethel-based housing agency run by the Association of Village Council Presidents, agreed with many criticisms in the audit but said the program was not a failure.

"I disagree that it's not working. It's been very effective in providing housing for the needy. The program just needs somebody at HUD who is willing to stand up for what we need."

Guinn said the housing program operated at a furious pace in the early 1980s, and mistakes were made.

"A lot of it was finding a contractor who knew how to build in rural Alaska," he said. "And a lot of (housing) directors didn't have construction experience. We were playing catchup. I think our housing authorities built over 400 in one year.

"We were building so fast there would have been problems in construction and in HUD oversight."

In the early years of the program, homes were built to Lower 48 standards, he said. "There were not adequate furnaces, not adequately insulated. They (HUD) don't realize that when it's 30 below and blowing 100 outside you have got quite a wind-chill factor."

The Native housing agencies are repairing many of the problems and training families in basic maintenance, he said.

"They are all being repaired. We will authorize $25,000 or more per house for new furnaces, doors, insulation."

A problem that all concerned agreed on was a shortage of money for the program, and an unrealistic "cap" of $92,200 that can be spent for any one home.

That money must stretch to pay for "planning, architecture, a soils engineer, shipping, construction, everything," Guinn said. "In many cases in remote villages it is not enough to do the job, so at some point you have to cut corners."

"When you get out to some of these remote tundra villages, gravel is like gold," he said. "You can't afford to fly it in. A couple years down the road the house starts moving."

Guinn said that HUD signs off on every home that is built, and "someplace along the line I think somebody in the HUD system should have had the intestinal fortitude to say, this foundation won't work or this heating system isn't adequate."

Opinion

Energy costs drain the rural economy

By DAVID G. HOFFMAN

In most rural Alaskan communities energy costs are placing a serious strain on the local economy. this burden is illustrated by research showing that rural Alaskans spend between 16 percent and 37 percent of their family incomes on energy bills. In Anchorage energy costs take only two or three percent of a person's paycheck.

Local governments are feeling the pinch too, as the result of the downturn in the states economy combined with cuts in federal funding. Many rural communities have facilities that they can no longer afford to heat or maintain.

Alaska is one of only three states in the union without an energy standard for home construction, and all too often homes built here simply don't measure up to the climate and states energy costs. A Department of Community and Regional Affairs Rural Housing needs assessment found that 28 percent of homes in rural Alaska could not ,maintain a healthy indoor air temperature of 70 degrees Fahrenheit during the long winter months, regardless of how well the furnace or woodstove is burning.

The wretched condition of rural housing was underscored in the Federal Housing and urban Development's recent audit of it's rural housing program. HUD auditors determined that rural housing projects "are being developed which are infeasible, improperly designed and inadequately constructed."

This can be seen in the Northwest Alaska community of Golovin, where a low income family living in a 400 square foot home uses a barrel of heating oil a week and still cannot achieve a comfortable temperature.

Answers are not hard to find

An obvious solution would be to construct home that can withstand the rigors of an Alaskan winter and have affordable heating bills. It's now possible to construct homes that are comfortable and healthy, and can be heated for less than $300 a year. The department of Community and Regional Affairs recently announced the award of a grant to build 13 such "superinsulated" homes in Golovin next summer.

The Alaska Craftsman Home Program, also sponsored by the Department of community and Regional Affairs, encourages the construction of such homes by offering training and technical assistance to contractors, lending institutions and home builders. Over 50 homes across the state are now being constructed to the program's voluntary standard. But voluntary standards are not enough.

Energy standard needed

In addition, the state needs to implement an energy standard for homes that have been purchased with state financial assistance. The department has developed a standard geared to the different regions of the state to reflect Alaska' diverse climate, energy expenses, and construction costs. Implementation of the standard is being delayed, however, by a legal challenge from a small group of urban contracts.

Rep. Kay Brown, D-Anchorage, has introduced legislation (House Bill 358) which addresses the legal issues raised by the suit, to clear the way to implement the standard. Alaskans deserve homes that are comfortable, healthy and affordable to heat.

Another solution would be to retrofit community facilities so they could have healthy temperatures and be less expensive to maintain. For example, it is possible to reduce a building's heating costs an average of 60 percent through remodeling it to so-called "superinsulation" values. New energy-efficient light bulbs can provide the same amount of light while using 35 percent less electricity and last four times longer than standard light bulbs.

These are not pie-in-the-sky dreams. Down to earth examples can be found in Tununak where the village clinic was superinsulated, reducing the annual $4,000 heating bill to $1,100. a Mat-Su Valley home will be heated by its water heater after it is retrofitted through the Alaska Craftsman Home Program. A lighting retrofit in Nikolai cost $2,246 and is expected to net a $1,151 savings in the first year.

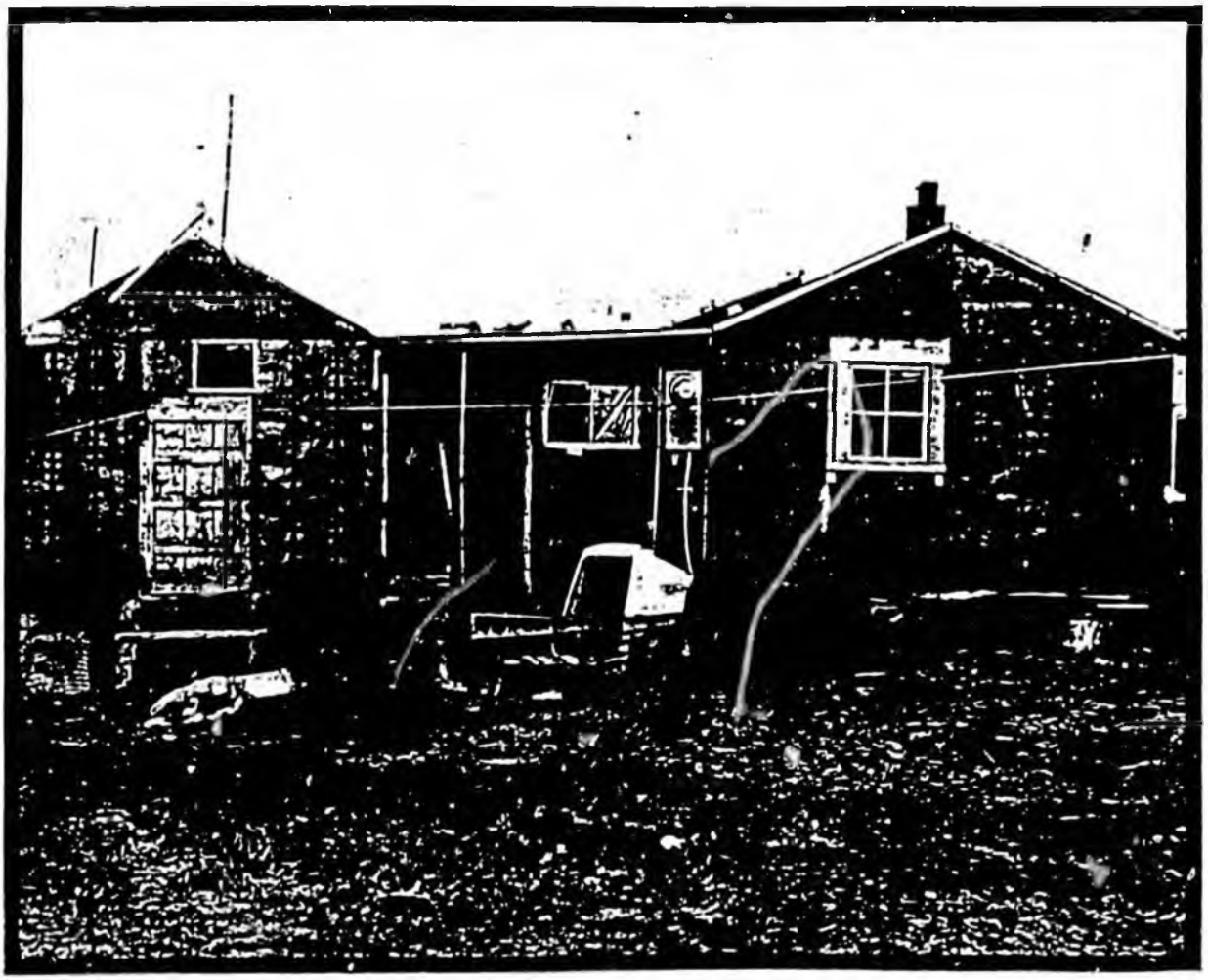
Everybody benefits

The Low Income Weatherization Program assists those Alaskans who are least able to afford high energy bills. The heating expenses for needy Alaskans participating in the program have been cut by an average of 25 percent after receiving home improvements such as additional insulation, repairs to cracked walls and installation of efficient heating systems. This program makes particular sense for rural Alaska with its high energy costs, severe weather and high incidence of substandard housing.

Energy programs strengthen local communities by reducing the operating costs of homes and community facilities, ensuring long-term financial savings. And because the labor skills needed to make the improvements are easily attainable in each community, sorely needed jobs are created. it's a combination that makes sense for rural Alaska.

(David G. Hoffman is the Commissioner of the Department of community and Regional Affairs, which is responsible for energy conservation and weatherization programs in the state.)

1988 Rural Housing Needs Assessment Study



DOYON Region - Photo by Rob Stapleton, Jr.

State of Alaska
Steve Cowper, Governor

Department of Community
and Regional Affairs
David G. Hoffman, Commissioner

Submitted in fulfillment under contract 88-0137 to the
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by

Rural Alaska Community Action Program (RurAL CAP)
ASK• Marketing Information Search
Alaska Public Interest Research Group (AKPIRG)

March 1988

HOUSING PHYSICAL CONDITION BASED ON INSULATION

In the following table, percentages of houses with attics and walls of different R-values are listed by region. R-values refer to the level of insulation. One inch of batt insulation is approximately equal to R-3. For example, R-38 is equivalent to 12 inches of batt, and R-19 is equivalent to 6 inches of batting.

Insulation Levels in Percentages:

	Attic					Walls		Can't Maint
	R<R11	R<R19	R<R22	R<R30	R<R38	R<R11	R<R19	70 deg F
Ahtna	15%	51%	78%	80%	96%	22%	69%	56%
Aleut	23%	36%	50%	65%	76%	23%	45%	16%
Arctic Slope	0%	6%	19%	36%	56%	1%	18%	37%
Bering Sts	14%	29%	89%	94%	97%	11%	41%	67%
Bristol Bay	14%	39%	76%	78%	90%	19%	52%	22%
Calista	3%	34%	68%	77%	77%	11%	78%	41%
Chugach	16%	26%	47%	56%	71%	20%	52%	15%
Cook Inlet	7%	22%	52%	71%	77%	10%	62%	12%
Doyon	4%	18%	47%	74%	79%	11%	65%	40%
Koniag	2%	11%	17%	18%	20%	3%	63%	27%
NANA	25%	25%	50%	50%	50%	1%	26%	72%
Sealaska	12%	55%	93%	95%	97%	15%	81%	41%
TOTAL	9%	29%	58%	69%	76%	12%	57%	36%

According to the 1986 Energy Conservation Standard For New Residential Buildings published by the State DCRA Office of Energy Programs, the minimum prescribed insulation requirement for ceilings is R-38, except in Arctic Slope where the ceiling requirement is R-52. The minimum prescribed insulation requirements for walls are R-21 in Sealaska; R-18 in Aleut, Chugach, Cook Inlet, and Koniag; R-25 in Ahtna, Bristol Bay, Calista, and Doyon; R-30 in Bering Straits and NANA; and R-35 in Arctic Slope.

Houses with attic R-values less than R-38 range from 71% to 97% in nine of the regions, and more than half of the houses in two more regions. Houses with wall R-values less than R-19 range from 41% to 81% in all but two region.

Living in the mistakes of the past

Houses are slums after only 10 years

By HAL BERNTON
Daily News reporter

ST. MICHAEL — When the west winds bring a blast of cold Siberian air to the island village of St. Michael, Leo Kobuk huddles indoors and tries to keep his family warm. He tacks a blanket across the back door, puts an electric heater in his bedroom and turns his fuel-oil stove up full blast.

In the worst of the winter cold snaps, when the outside temperature may dip below minus 50, Kobuk still can't shelter enough heat to keep his house comfortable. Frost forms along the living room wall, as roots overhead recede and water may freeze and spoil on the kitchen floor.

In warmer weather, Kobuk has other problems to contend with.

Snow that drifts into the eaves melts and trickles down through walls and the kitchen ceiling. As summer approaches, the permafrost beneath his house begins to thaw. The wood foundation leaves and his floor begins to move in strange ways. Kobuk used to level the house by jacking it up and adjusting the wooden support blocking. But the jacks never did the job. They raised the middle of the house, but left the sides sagging.

Kobuk's three-bedroom box house is one of 500 housing units financed 10 years ago by the federal government in 10 Bush villages. Designed by architects of the federal Bureau of Indian Affairs, each house was identical to the next — rectangular red, yellow and green-painted boxes of siding, plywood flooring and metal roofs.

A decade after their completion, many of the houses are falling apart. Floors are rotting, joints separating and some houses are in danger of sliding off their foundations. Kobuk can shove a knife blade through the cracks along the base of his living room wall.

"When they were building

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Andrew and Esther Otton stand in front of their old house, left, and their new home.

Designers slowly learn how to build housing in the Bush

By HAL BERNTON
Daily News reporter

ST. MICHAEL — From the outside, the house looks quite ordinary — boxcar shape, stilt-like foundation and metal roof. Only a fresh coat of yellow paint distinguishes it from much of the other Native housing built in this western Alaska village.

But step inside on a sub-zero, mid-winter day. With the end of a small fuel-oil furnace, the house stays warm. No ice on bedroom walls. No frost inside the windows. No huge heating bills. To St. Michael villagers, this house — just completed in December — means a major step up.

"Everybody in town, they look at this and say, 'where were these houses 12 years ago?'" said Albert Washington, St. Michael's mayor.

The St. Michael house is an example of a new wave of federal housing in the Bush — better designed and better insulated than predecessors built in the 1970s. Although not without problems, the new dwellings are helping improve the tattered reputation of federal Native housing projects in rural Alaska. These projects offer villagers the chance eventually to take title to the houses through monthly payments. The size of the payments is pegged to their incomes.

A decade ago, many of the Native houses built in Alaska proved better-suited for milder Lower 48 climes. Nearly a thousand dwellings — low-budget affairs put together with the aid of of villagers who often lacked construction skills — went up throughout western and interior Alaska. Housing materials were of poor quality. Foundations ill-designed. Hundreds of the homes now seemed destined for early obsolescence.

Today, the permafrost and intense cold of the far north still pose formidable construction challenges. But in a long and sometimes painful learning process, designers are figuring out ways to build better Bush housing.

The St. Michael house, a prototype developed by Phil Kaluza, a Nome builder, features a double outer wall stuffed fat with insulation. Triple-pane windows — made by a Fairbanks manufacturer — help keep warm air trapped inside. When the air gets stale, a heat exchanger sends the air outside and draws in fresh air. The furnace, controlled by a computer sensor, is nearly twice as energy-efficient as old-style systems installed in many of the neighboring houses.

Design Lab Inc., an Anchorage-based architectural firm, also has worked to improve the quality of Bush projects. During the past decade, it has designed about 1,500 houses for regional housing authorities funded by the federal Department of Housing and Urban Development. In the interior, it has created Indian homes of log. In the Yukon-Kuskokwim Delta, houses feature 10-inch-thick walls and heavily insulated floors and ceilings. In Southwest, the firm has experimented with a double-walled structure.

Foundation systems also have changed. A decade ago, house sites often were flat spots bulldozed out of the tundra. With the protective insulation of the vegetative layer stripped away, these sites turned to bogs in warm weather. Houses built on these sites tended to lean on their pods as the wooden support system sank into the softened ground.

Since then, two different tacks have been taken to deal with the permafrost. Some designs call for metal pilings to be driven through the permafrost layer and into solid ground. Others designs leave the tundra intact, then insulate with special synthetic pads and gravel wherever possible. The wood foundations are built on top of this cover. Each year, as the ground settles, they are leveled with jacks.

Federal officials who fund the housing projects view the new designs with cautious optimism. Many of the cold problems that plagued the '70s-vintage houses have been vanquished. But in the process of curing old problems, new ones have arisen.

About 800 of the more than 3,000 late-model project houses have major design problems the federal government is spending $8.6 million to repair, said Miller Lutton, director of HUD's Alaska housing program. These houses are scattered about more than 40 Alaska villages.

"If you counted the number of innovative houses that have been tried in Alaska, you could count over 100," Lutton said. "Many appear to be successful. But you got to put them out there for a while."

Almost all of the new hous-

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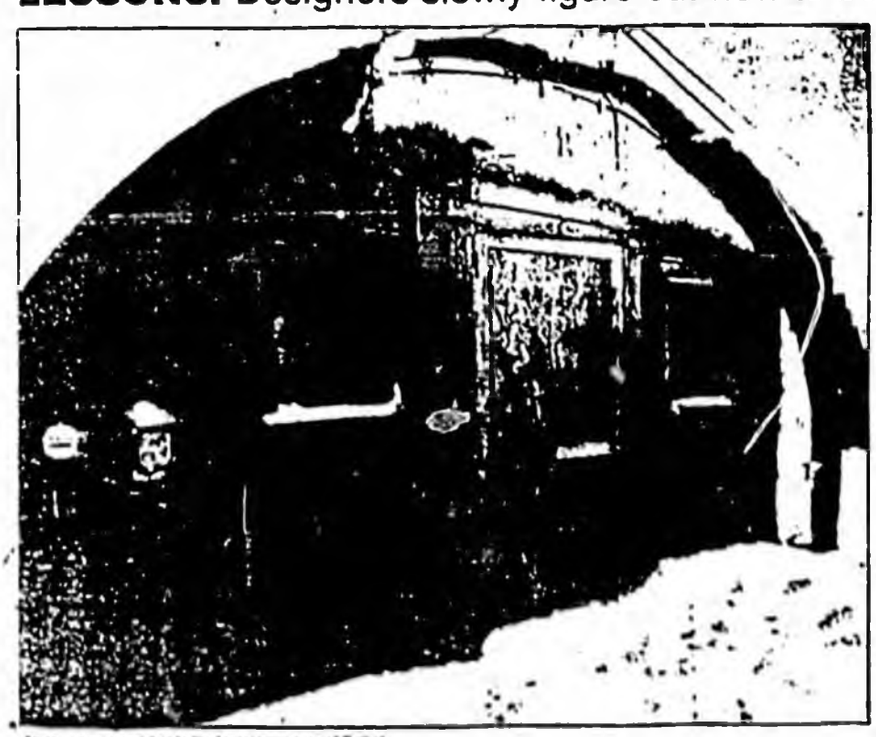
LESSONS: Designers slowly figure out how to build houses in the Bush



An abandoned building in the Limestones area of Bethel

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re are perched up off the ground on wooden stilts. To keep cold air from blowing up underneath the house, some weatherization teams and home buyers have put particle board skirting around the stilts. The skirting not only keeps out the cold air, it holds in the warm in some soils, that may cause the permafrost to melt. Once that happens, some foundations have begun to sag and self destruct, Amays said.

Even when design problems are overcome, houses still may not meet early expectations. Most of the houses now are built by contractors, and housing authorities are finding they need tough quality control to make sure the jobs get done correctly.

In a recently completed housing project in Scammon Bay, for example, Felix Grant, a villager who worked on the project, says construction crews rushed through the job. They didn't nail down all the walls and left some wood supports out from under some floors.

When Grant moved into his new house, he found the vinyl floor unraveling and soaked with fuel oil. "There are lots of problems," Grant said. "The whole plywood floor should come out where it's soaked with fuel oil."

John Gwinn, director of the Association of Village Council Presidents, the Bethel-based housing authority that developed the Scammon Bay project, says he's aware of some problems with new houses. The contractor has been asked to go back and fix them, he says.

Gwinn also has been working to get village home buyers to take care of more of their routine maintenance. In theory, when a toilet plugs up, a window breaks or the house needs a fresh coat of paint, the home buyer is to be responsible for repairs.

But home buyers often lack the inclination or the skills to do such work. And their villages often have no hardware stores to supply parts. Many look at the housing authorities as landlords, whose staff should fix whatever goes wrong.

Since the late '70s, Gwinn says his Bethel housing authority has built more than 600 houses in Kuskokwim-Yukon Delta villages. But the program still has fallen far short of meeting all the needs in his region for low-income housing. "There are 56 villages in the area, and there are a lot left that haven't had any housing."

More than 15,000 Eskimos are housed in the Bush, Amays said.

> *"If you counted the number of innovative houses that have been tried in Alaska, you could count over 100."*
>
> — Miller Lutton

ALASKA 500: 10-year-old federally financed houses now falling apart

Continued from Page E-1

these houses, they were thinking of the Lower 48," says Kobuk's wife, Katherine. "They are not built for Alaska."

Andrew and Esther Otten, the Kobuks' neighbors, have caulked up most of the cracks in their inside walls. But on a blustery day, the wind still freezes the moisture to the living room paneling.

The Ottens hung up a tapestry in the house proclaiming "Home Sweet Home." But Andrew Otten said he sometimes has second thoughts about the federally financed housing.

"My old house used to be warmer. It had two rooms and it didn't use that much oil."

The Alaska 500 homes now hold an infamous niche in the history of a gargantuan federal effort to bring modern housing to Alaska's villages. The federal Department of Housing and Urban Development — working largely through regional housing authorities — has spent more than $500 million to build more than 4,500 houses in rural Alaska.

The program has sought to improve the living conditions of Alaska Natives by moving them out of overcrowded shacks and cabins and into more spacious, better-built housing. Wherever possible, the houses were hooked up to new sewer and water systems developed by the Public Health Service. Villagers then became home buyers, obligated to make modest monthly payments that eventually allow them to take title to their houses.

Today, the program is nearly 20 years old and has replaced much of the ramshackle old housing in the Bush. By many yardsticks, it can be measured as a success.

In recent years, architects have adapted innovative insulation systems, foundation designs and construction techniques to create a new generation of public housing. Some of these homes suffer from design defects, but most are better able to withstand the rigors of Alaska's permafrost and two-zero cold than the early housing of the 1970s.

As overcrowding has decreased, the incidence of tuberculosis, once a major killer, has declined. And life expectancies have increased. Better housing has helped slow the rural migration to cities. In many villages, populations have stabilized or begun to increase, said Miller Lutton, director of the federal housing program in Anchorage.

But the program has a mixed legacy. In learning how to build good housing, the government has financed a lot of bad. And many people are still living in the mistakes of the past, saddled with sagging foundations and fuel bills they can ill afford to pay.

Kobuk says he uses more than $250 a month worth of fuel — three-and-a-half 55-gallon drums of oil — during the worst of the winter cold. Federal assistance pays only part of the bill.

Rafael Afcan, an aging carpenter living in another federally financed house in St. Marys, a Yukon River village, says his fuel bill leaves him with little money for groceries. "Sometimes, it's a question of paying for heat or paying for food."

All told, the problem houses include about a 1,000 houses built between the late '60s and the late '70s representing about a fifth of the total federal project units. These houses are riddled with design and construction flaws. Some have been abandoned or razed to make way for replacements; the rest still are inhabited.

Some of the worst housing is in St. Michael and seven other western Alaska villages. Here, more than 40 percent of the housing is of the Alaska 500 vintage. Many of the houses "are in danger of collapse or self-destruction," wrote Dan Harrelson, executive director of the Bering Straits Housing Authority, in a 1984 report to federal officials.

Harrelson listed faulty wiring, foundations sliding off their earthern pads, deficient insulation, mildew and rot among the houses' many problems.

Villagers, disappointed with the quality of the homes, joined with other Alaska 500 homeowners in a class action suit against HUD for failure to deliver on its promise of a "decent home in a suitable living environment."

In a recent out-of-court settlement, the agency offered to try to repair most of the design and construction defects of the Alaska 500 homes. As an alternative, a villager could simply take title to his home, as is.

Most villagers chose to take the house and forget about the costly fix-up job. "I decided it would take years to get any of the repairs done," Kobuk said.

Andrew and Esther Otten in their home in St. Michael

The federal housing program in the Bush was launched in the mud-'60s as national efforts to attack poverty in America reached a fever pitch. East Coast journalists trekked to Appalachia, the Midwestern ghettos and the Southern farm belt to profile the plight of the poor. Then, in the summer of 1968, Homer Bigart, a New York Times reporter, reached Alaska, and proclaimed the Kuskokwim-Yukon Delta the poorest place in the nation.

"The worst slums in the United States are not in racially turbulent quarters of New York, Cleveland, Chicago or Los Angeles," Bigart wrote. "By all available indices of poverty, they are sparsely strewn, like garbage on an ice floe, along the nation's desolate sea frontier with the Soviet Union."

The Eskimos that Bigart encountered had largely abandoned traditional homes of sod, driftwood and whale bone in favor of small log cabins and shacks of plywood, tarpaper and tin. Subsistence foods, not measured in standard poverty indices, helped make up for a lack of cash to buy groceries. But diet alone could do little to combat the diseases that ran rampant in the cramped, overcrowded housing.

In Kuskokwim Delta villages, 12 out of every 100 babies died before age 1. Tuberculosis, introduced decades earlier by whites, was a major killer of Eskimo and Indian adults. The Natives had a life expectancy one-half that of the average American.

Two years after Bigart's report, a Senate subcommittee led by Sen. Ted Kennedy, D-Mass., arrived in Bethel to tour a dilapidated section of riverside property known as Lousetown. The area was such a mess that several senators didn't even want to get off the bus, recalls Gene Pamplona, a Bethel resident who accompanied the senators. Kennedy, followed closely by Sen. Walter Mondale, D-Minn., disembarked, gingerly walked up to a garbage dump and discovered a dead dog, frozen to the ground.

Finishing his tour, Kennedy vowed to build new housing in Bethel. Within months of his return to Washington, the money was in the pipeline.

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The first federal funds flowed to the Alaska State Housing Authority, which quickly launched a series of village housing programs. In many cases, these houses "began to deteriorate within moments of the last nails being driven," wrote one ASHA official in a memorandum forwarded to Alaska Sen. Ted Stevens. "The common complaints ... consist of ceiling tiles coming apart; frost accumulating six feet high on the walls; cabinets coming off the walls; sagging, buckling ...."

Instead of winning Bush support for its housing programs, ASHA was hit with class action lawsuits filed by Alaska Legal Services lawyers. ASHA ended up giving away 200 of the houses to homeowners. Another 100 homeowners, in a settlement funded by the federal government, obtained new houses.

These fiascos convinced ASHA that it wanted no part of any new Bush housing projects. "It has been said that even if ASHA could walk on water, it would nonetheless drown in the Bush areas, ...," the ASHA official wrote. "... The animosity of the purchasers towards ASHA ... as a result of these programs is immense. These people feel that they have been lied to and that representations have been made that were not kept."

Despite ASHA's withdrawal from the Bush, the federal pipeline of housing dollars kept flowing. In 1973, it reached north to St. Michael. Back then, many St. Michael villagers lived in cabins and shacks left over from the boom days of the Gold Rush. During the early 1900s, St. Michael was a town of more than 10,000 people, the major port of entry for goods bound to the gold fields of the upper Yukon.

After the Gold Rush, most of the whites left. By the time the federal housing project began, St. Michael's population had dwindled to less than 400, mostly Eskimos. For lodging, some lived into the old log dwellings left behind by the Army; others had pieced together plywood and tarpaper shacks.

The St. Michael project was an attempt at self-help housing, home buyers themselves would build the houses and would be paid for at least part of their labor. To ensure quality housing, the Bureau of Indian Affairs was appointed to develop designs and supervise construction. Regional housing authorities were created to administer the program.

The program, which encompassed 500 houses in 13 villages, may have looked good on paper, but it unfolded in a chaotic series of events. Most of the houses, pre-cut true piece-together packages by an Oregon manufacturer, were barged north in the summer of 1975. One of the barges sank in the Bering Sea. The rest of the houses arrived safely in the villages.

In the frenzied months of construction, there proved to be scant time for quality control. The villagers proved largely unskilled in home building. And in some regions, feuds between the BIA and regional housing authorities prevented inspectors from ever setting foot in the villages.

At many sites, the fragile layer of tundra that helps keep the permafrost cool was stripped away to prepare for the wood foundation pad. That meant the permafrost would melt, turning into a soggy bog when the temperature warmed. Insulation and plywood were soaked by the rain, then slapped into the homes. The wet insulation lacked heat-retention value, and the plywood gradually rotted.

Poor-quality materials and design problems compounded the errors of faulty construction. The windows, for example, even if installed properly, let in lots of cold air. The fiber board cabinets were made cheaply. Even when nailed firmly to the walls, they tended to self-destruct. Tops fell off drawers and doors off shelves.

Still, when the homes finally were finished, people were eager to move in, recalled Albert Washington, mayor of St. Michael. "First cold weather we got, everyone was excited. They thought they were going to be warm. Then they found out how cold the homes were. The kitchen stoves couldn't even begin to heat the homes."

One hundred miles to the south, along the bluffs overlooking the Andreafsky River, 20 St. Marys villagers were moving their families into new homes. Today, those homes are in much the same battered shape as those in St. Michael.

Therese Mike, mother to 11 children, lives in a house where the interior walls have separated from the roof. The gap between the two is wide enough to stick a fist through. Her kitchen pipes leak, so most of the time she keeps the water turned off. Her hot water heater broke down years ago, so none of the kids ever takes baths in the tub. The house's foundation needs to be shored up.

Mike is a big woman who wears a long dress and floral apron. She prefers to speak in her native Yupik, but will switch to English for a visitor.

She says her husband is in jail, so she is raising her family alone.

In December, she heard news of the new settlement reached by home buyers with the federal government. Since then, she's been mulling over her options. Should she get the house fixed by the government and continue her $70-a-month payments? Or should she opt for an renovation, but title free and clear to the house?

It would be nice to get the house fixed up, she says. But she isn't sure she can afford that option. At times, she hasn't been able to come up with the monthly payments and has been threatened with eviction.

Perhaps it's best to take title to the house, she says. Repairs can await another day.

To date, all but a handful of the Alaska 500 homeowners have chosen to settle the suit by foregoing repairs and taking title to the houses.

That choice troubles Andrew Pushaw, mayor of St. Marys. He doesn't see much hope for the Alaska 500 in his town without a lot of work. "If they keep shuffling they won't withstand another 10 years. We'll have to see them down and rebuild."

The cabinets in Therese Mike's home in St. Marys are coming apart.

Daily News photos by Bob Hallinen

An above-ground utility system connects newer houses in Bethel.