HB

681

COMMITTEE REPORT

HOUSE

FURTHER: FINANCE

(7)

1/22/82

Date: _____

Mr. Speaker:

The Committee on RESOURCES has had HB 681

"An Act raising the limit on loans from the alternative technology and energy revolving loan fund."

under consideration and ~~(a majority of the committee) (the committee)~~ reports it back with the following recommendations:

[ ] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[X] replace with CS for H.B. 681 [ ] same title [ ] new title

and recommends Do pass

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note

[ ] reports it back without recommendation

[ ] referred to the _____ Committee

MEMBERS SIGNING
DO PASS

MEMBERS HAVING
OTHER RECOMMENDATIONS:

Chairman

H 60 (Rev. 12/78)

THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST
Bill/Resolution No. HB 681
Title An Act raising the limit on loans from the Alternative Technology and Energy Revolving Loan Fund.

Requested by Hurlbert, Fuller & Rogers Date 1/22/82

II. FISCAL DETAIL
Agency Affected Department of Commerce & Economic Development
Program Category Affected Economic Development
BRU, Program, Or Subprogram(s) Affected Division of Loans and Veterans' Affairs
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS,CLAIMS,ETC.						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

FUNDING (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER (Specify Source)						
	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS

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

III. ANALYSIS (See Fiscal Note Preparation Instruction, Section III)

If the funding level of the Alternative Technology and Energy Revolving Loan Fund was increased, the additional demand placed on the program by this increase of the loan limit would need to be met with additional staffing to satisfy the demand

IV. DATE _____ PREPARED BY D.A. Hostak Don Hostak, Director
AGENCY Department of Commerce & Economic Development
PHONE 465-2555 or 465-2510 Division of Loans and Veterans' Affairs

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)
33-001 (Rev. 12/81)

STATE OF ALASKA

JAY S HAMMOND
GOVERNOR

DEPARTMENT OF COMMERCE & ECONOMIC DEVELOPMENT
DIVISION OF ENERGY & POWER DEVELOPMENT

7TH FLOOR MACKAY BLDG.
338 DENALI STREET
ANCHORAGE ALASKA 99501
PHONE: (907) 276-0508

February 5, 1982

The Honorable Vern Hulbert
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Subject: Alternative Technology and Power Resource Revolving Loan Fund increase from $10,000 to $50,000.

Dear Representative Hulbert:

This letter provides cost information regarding current prices of alternative energy systems as per your request. Costs have continually escalated due to inflation to a point, whereas, it is extremely difficult to purchase and install a good quality, proven system that meets needs for less than $10,000 especially in Bush communities. Our experience has shown that a reasonable demand for an average bush house ranges 250-350 KWH per month. The costs listed below are based around that range of demand for three different systems.

Wind

Batteries 335 amp/hr; 16 at $295 each = (will give up to 6 days storage)	4,720
wind generator	
2 KW installed	*18,000 - 20,000
4 KW installed	*24,000 - 28,000
10 KW installed	30,000 - 35,000
inverter	3,300

MINIMUM = $26,020.

* Price varies with location due to transportation costs and costs of constructing tower foundations. Also, it should be noted that wind systems are available for grid intertie which eliminates the need for battery storage and inverters. Also, it should be noted that through PURPA a payback is available.

Solar

Present technology is at a point, whereby, photovoltaic systems are around $10 a watt FOB, Anchorage, Transportation and installation varies considerably by the specific application. Nonetheless, a 3 KW system would cost $30,000 plus transport to the site and installation. Battery storage ($4,720) and an inverter ($3,300) would also be required. It is not unreasonable to assume $50,000 installed cost as an average for 3 KW. Price can be decreased by purchasing less total power generation and storage capacity.

Small Hydroelectric

There are various configurations of small hydroelectric systems and prices vary accordingly. Typically one would want 5-10 KW of power available. A Pelton wheel (3 KW) costs $5,000. Added to this would be pipe $10,000; inverter $3,400; batteries $4,720 and a structure (power shed) to house the components. Transportation and installation costs vary but an $8,000 - $10,000 average is not unreasonable. Total cost would range from $28,000 to $34,000.

Conclusion

Our research indicates ample justification to increase the loan amount from $10,000 to $50,000 in order to stimulate Alternative Technology and Power Resources which lessens diesel fuel consumption. This amount will more adequately cover the entire spectrum of home application which includes urban areas, Arctic bush and Southeastern over a period of years and for various regions of State. This Division supports amending the loan amount from $10,000 to $50,000 per household.

Sincerely,

Lloyd M. Pernela
Director

LMP:DCD.sh

EXAMPLES OF WIND SYSTEM PACKAGE PRICES (APPROXIMATE)

JACOBS WIND SYSTEM 10KW	Wind Generator	13,800	
	Mastermind Controls	2,950	
	80 Tower	4,335	
	MAJOR COMPONENTS	$21,085	
	wire/cement/misc	1,000	
	Installation cost	4,000 **	
**use of crane for erection	TOTAL		$26,085

SAME SYSTEM IN NOME (or similar area accessible by jet)

	Major Components	$21,085	
	Labor costs	8,000 **	
	Frt costs	2,000	
**includes per diem and air fare	TOTAL		$31,085

SAME SYSTEM IN REMOTE VILLAGE - not easily accessible & without crane

	Major Components	$21,086	
	Labor costs	4,000 (min)	
	Frt costs	15,000 **	
**includes per diem and air fare and use of gin pole	TOTAL		$40,085

THE SYSTEMS IN THE REMOTE VILAGE EXAMPLE CAN VARY DUE TO INDIVIDUAL NEEDS.

AERO POWER SYSTEM 48 volt	Wind Generator	4800	
	60' Tower	1800	
	Best Inverter	3145	
(Installed in Seward)	Batteries (8)	2360	
	Misc materials	800	
	COMPONENT COST	$12,905	
	Approx Installation	3,000	
	TOTAL		$15,905
SAME SYSTEM IN NOME	Major Components	15,905	
	Approx Labor	5,000 **	
**includes per diem & air fare	Freight costs	1,000	
	TOTAL		$21,905

SAME SYSTEM IN REMOTE VILLAGE NOT EASILY ACCESSIBLE

	Major Components	15,905	
	Approx Labor	7,000**	
**includes per diem air fare	Freight costs	3,000	
	TOTAL		$25,905

THE SYSTEMS IN THE REMOTE VILLAGE EXAMPLE CAN VARY DUE TO INDIVIDUAL NEEDS.

STATE OF ALASKA

DEPARTMENT OF COMMERCE & ECONOMIC DEVELOPMENT

DIVISION OF ENERGY & POWER DEVELOPMENT

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