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Community Action Partnership
Association of Idaho and
American Association of
Retired Persons.

RECEIVED
FILED
2004 FEB 20 PM 3: 29
IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF) CASE NO. IPC-E-03-13
IDAHO POWER COMPANY FOR AUTHORITY)
TO INCREASE ITS INTERIM AND BASE)
RATES AND CHARGES FOR ELECTRIC)
SERVICE)
)
)
)
)
_____)

COMMUNITY ACTION PARTNERSHIP ASSOCIATION OF IDAHO
DIRECT TESTIMONY OF KEN ROBINETTE

EXHIBIT #806

Idaho Power LIWA Statistics
April 1, 1989 to December 31, 1994

IDAHO POWER ENERGY MANAGEMENT DEPARTMENT
 LOW INCOME WEATHERIZATION PROGRAM
 ENERGY SAVINGS REPORT
 FOR THE PERIOD STARTING 04/01/89 AND ENDING 12/31/94
 DATE OF REPORT: 01/04/95

AGENCY_NO	NUMBER OF JOBS	TOTAL KWH SAVED	TOTAL COST	AVERAGE COST PER JOB	IPCO COST	AVERAGE IPCO COST PER JOB	AVERAGE KWH SAVED	TOTAL COST PER KWH	IPCO COST PER KWH	TOTAL KWH SAVINGS PER SQFT
WESTERN ID COMMUNITY ACTION AGENCY										
10-800	203	998,794.21	282,815.22	1,393.18	168,961.63	832.32	4,920.17	\$.28	\$.17	5.02
COMMUNITY ACTION AGENCY, INC										
15-800	6	27,086.95	11,748.66	1,958.11	6,240.85	1,040.14	4,501.16	\$.44	\$.23	5.81
MAJHEUR COUNCIL ON AGING										
23-800	86	239,818.60	129,158.26	1,501.84	76,576.78	890.43	2,788.59	\$.54	\$.32	2.86
EL-ADA COMM ACTION AGENCY										
30-800	349	1,268,855.63	410,537.02	1,176.32	216,481.99	620.29	3,633.40	\$.32	\$.17	3.61
IDAHO MIGRANT COUNCIL										
31-800	147	434,321.48	162,120.63	1,102.86	93,563.57	636.49	2,954.57	\$.37	\$.22	2.97
CANYON CITY ORGANIZATION ON AGING										
31-801	289	1,093,480.42	417,254.17	1,490.19	199,140.88	711.22	3,905.22	\$.38	\$.18	3.85
SOUTH CENTRAL COMM ACTION AGENCY										
50-800	564	2,264,847.45	747,912.29	1,326.09	500,049.48	886.61	4,015.69	\$.33	\$.22	4.53
SOUTH EAST ID COMM ACTION AGENCY										
70-800	236	1,188,454.03	802,210.25	3,399.20	185,682.55	786.79	5,035.82	\$.66	\$.16	4.80
TOTAL	1871	7,514,758.77	2,963,756.50	1,584.05	1,446,697.73	773.22	4,016.44	\$.39	\$.19	4.14

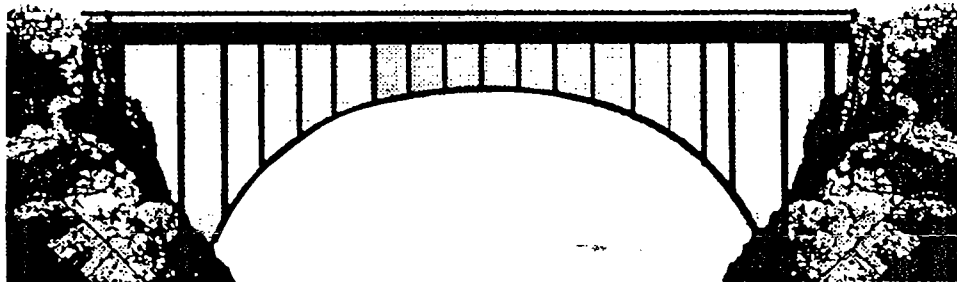
IP & DC

IP only

NOTE: ALL FIGURES INCLUDE REPAIRS AND THE IPCO ADMINISTRATIVE FEE

IDAHO POWER COMPANY

**Partners in Energy
Conservation**



**WITH
IDAHO
WEATHERIZATION
PROGRAMS**

10/08/98

IDAHO POWER
**Low Income Weatherization
Assistance Program**

IDAHO POWER KUDOS

- GREAT PARTNERSHIP WITH IDAHO POWER COMPANY
 - Would not have been able to perform many of the services to low-income families.

- HAVE ALLOWED AGENCIES/ORGANIZATIONS TO UP-GRADE FACILITIES TO ACHIEVE HIGHER ENERGY EFFICIENCY

- TEAMED UP ON DOE NON-ELIGIBLE HOMES
 - V. Jackson
 - B. Climer
 - G. Pullman

- WHEN AGENCIES HAVE NEEDED ADVICE ON ELECTRICAL HOMES/ISSUES THE LOCAL REPRESENTATIVES ARE ALWAYS THERE TO OFFER PROFESSIONAL ADVICE

THANK YOU!

IDAHO POWER
Low Income Weatherization
Assistance Program

BARRIERS

**WHY AGENCIES ARE NOT SPENDING
ALLOCATIONS**

- CONTRACTS RECEIVED PRIOR TO CONTRACT DATE
 - Agencies not turning in work until IP contracts are received.

- SMALL HOMES NOT BEING TURNED IN

- MOST ELECTRICALLY HEATED HOMES (Better housing stock-FMHA, mobile homes-aluminum wiring)

- 50/50 IS ONLY WHEN THE FOLLOWING ITEMS ARE NOT INCLUDED:
 1. Water Pipes
 2. Furnace Repair
 3. Health & Safety

- EA-3 NOT CAPTURING ACTUAL LABOR COST - ONLY ESTIMATED

- OFFSETTING AVERAGE DOE/IP COST PER UNIT

- AGENCIES DOWNSIZING TO REDUCE SUPPORT COSTS IN ORDER TO MEET STATE CONTRACTUAL REQUIREMENTS

IDAHO POWER
Low Income Weatherization
Assistance Program

SUPPLEMENTAL MEASURES

- PROCESS WAS SLOW IN RECEIVING AUTHORIZATION...MANY TIMES WE MAKE SUPPLEMENTAL MEASURE REQUESTS DUE TO EMERGENCY SITUATIONS
- FURNACE REPLACEMENTS, MODIFICATIONS OR REPAIRS
- WINDOWS/STORMS AND DOORS WHEN SIR'S ARE NOT AT 1 OR GREATER BUT NEEDS TO BE REPLACED (WE HAVE TO CHARGE TO HEALTH & SAFETY)



**LOW INCOME WEATHERIZATION PROGRAM
PAYMENT REQUEST - ADDITIONAL QUALIFYING MEASURES**
(Please complete with estimated costs and submit to
IPCo Energy Services, P.O. Box 70, Boise, ID 83707)

Date		Job/Invoice No.		
Payee (Agency)		Phone		
Payee Address	City	State	Zip	
Customer		Phone		
Address	City	State	Zip	
<input type="checkbox"/> OWN <input type="checkbox"/> RENTING				

REASON FOR SUPPLEMENT MEASURE (Explain)

Saves Energy
Safety Hazard
Code Violation

QUALIFYING MEASURES (Describe)	ESTIMATED COSTS		
	LABOR	MATERIAL	TOTAL
<input type="checkbox"/> Electric water heater repair or replacement			
<input type="checkbox"/> Electrical service upgrade			
<input type="checkbox"/> Mobile home skirting			
<input type="checkbox"/> Lighting			
<input type="checkbox"/> Window (Jalousie, Broken Glass, etc.)			
<input type="checkbox"/> Electrical wiring			
<input type="checkbox"/> Other			
TOTAL ESTIMATED COSTS			

----- Idaho Power Use Only -----

Estimated Costs Pre-approved by	Date
---------------------------------	------

Actual Costs:

Labor \$ _____
 Material \$ _____
 Total \$ _____

Cost Center	Cost Element	Type	Activity
505	5360	3	ILIW050
APPROVALS			
Employee No	Signature		

IDAHO POWER
**Low Income Weatherization
Assistance Program**

ADMINISTRATIVE EXPENSES

- CURRENT ADMINISTRATIVE CHARGE OF \$75.00 HAS BEEN IN PLACE SINCE 1989
- AGENCIES CURRENT ADMINISTRATIVE EXPENDITURES EXCEED THE IDAHO POWER \$75.00 ADMINISTRATIVE AMOUNT
- AGENCIES PRESENT AVERAGE ADMINISTRATIVE EXPENDITURES ARE \$146.00 EACH
- WOULD LIKE TO RECOMMEND SETTING ADMINISTRATIVE ALLOWANCE AT \$150.00 PER HOME

IDAHO POWER
Low Income Weatherization
Assistance Program

OTHER

- ADDITIONAL ELIGIBLE DWELLINGS
 - Idaho Power Contract Pg 2 Section 2
- IDAHO POWER REFERRALS
- TRAINING
- IDAHO POWER AUDIT ON NON LOW-INCOME HOMES
- OTHER

IDAHO LOW-INCOME WEATHERIZATION

Future of Idaho's Low-Income Citizens
Idaho Power Company

October 21, 1999

Agenda

- **Introductions**
- **The Weatherization need in Idaho Power Service Territory**
- **Current Program Design**
 - How does it work**
 - What measures are covered**
- **Barriers to fully addressing the need**
- **Program changes that will improve program effectiveness**

STATE OF IDAHO

Low-Income Weatherization Program

December 1998 through March 1999 Heating Season (LIHEAP bill assistance)

Eligible Idaho Households	21,230	
Total Idaho Power Households	6,990	33%
Total Eligible Idaho Recipients	53,884	
Total Elderly /Handicapped/Child 0-5	16,982	31.5%

Homes weatherized with Idaho Power LIWAP Jan 98-Nov 98

Homes completed state wide	272
This in comparison to eligible households for 98/99	4%
Housholds still eligible to receive Idaho Power LIWAP	96%

Average cost from three agencies (El-Ada, CCOA, SCCAA)

Note: these Agencies receive major portion of Idaho Power LIWAP

April 98-March 99 (Department of Energy Contract Period)

Total homes completed	687	(without Id Power LIWAP)
Total cost	\$1,044,722.00	
Average home cost	\$ 1,521.00	
Idaho Power Homes complete	245	
Total Idaho Power cost invested	\$ 137,249.00	
Average Idaho Power cost	\$ 560.00	

Total homes completed with DOE/Id Power LIWAP

Total homes completed	687
Idaho Power homes completed	36%

Total DOE/Idaho Power Cost

Total home cost	\$1,181,971.00
Average home cost	\$ 1,720.00

(Based on 245 Homes)

Total DOE average cost	$\$1,521.00 \times 245 \text{ homes} = \$372,645.00$
Total Idaho Power LIWAP average cost	$\$560.00 \times 245 \text{ homes} = \$137,249.00$
Combined DOE cost + Idaho Power LIWAP cost	$= \$509,894.00$
DOE Percent	73%
Idaho Power Percent	27%

CURRENT PROGRAM DESIGN

- **Idaho Power Pays 50% of Eligible Weatherization Measures determined by DOE regulations and the State of Idaho Energy Audit**
- **All measures must have a savings to investment ratio (SIR) of 1 or greater**
- **Eligibility is based on 133% OMB Guidelines**
- **Certain measures are eligible under Supplemental Programs
i.c. - water heater replacement, electrical upgrades**

Barriers

- **In reality current Program Design does not calculate 50/50 split for expenditures.**
- **Only the measure receiving (SIR's) Energy Saving savings are considered.**
- **Health and Safety Issues are left to be covered by Department of Energy.**

Program Changes Towards Effectiveness

- Allow *true* 50% split on total cost of home.
- Perhaps gear program similar to Bonneville Power Administration (BPA) Low-Income Weatherization Program.
- Include Health and Safety measures.
- Include electric furnace repair and/or replacement.
- Electronic Claim Filing (eliminate hand copying)



IDAHO POWER COMPANY
P.O. BOX 70
BOISE, IDAHO 83707

Susan Piper Grey
Community Relations Leader
Idaho Power, Box 70, Boise, ID 83707
(208) 388-2696

12/1/99

Ann Dick Henry and Kevin Viggers
Fl. Ada, Inc.
701 E 44th St
Boise, ID 83714

RE: 2000 EL-ADA LIWA Contract

Enclosed is the 2000 Low-Income Weatherization Assistance Program contract from Idaho Power. Because of population shifts in Idaho Power's Territory you may find a change in the disbursement of the funds:

- The term of the contract is for calendar year beginning January 1 and ending December 15, 2000.
- There is a change in the amount of the funding for Non-Profit Program Funds. Each agency may apply for money to be used from this fund which will be awarded at the discretion of IPCo.
- We used customer counts in your service territory to determine your specific allocation of moneys along with consideration of the percent of population below poverty based on the 1990 Census
- Contract changes include:
 - * Removal of the requirement that Eligible Dwellings, Additional Eligible Dwellings, and Eligible Buildings be primarily heated by electricity.
 - * Program Funds shall not exceed an average cost limitation of 75% support labor/ overhead and not less than 25% material investment average per Eligible Dwelling installed by the agency.
- Inclusion of allowable "Health and Safety Measures"
- The SIR (savings to investment ratio) is changed to 1.1 or greater.
- Adjustments which listed the unallowables of installing plastic window coverings and repair or replacement of fossil fuel heating have been eliminated.

We welcome suggestions you may have on how to improve and bring more value to the customers we all serve. Please contact me, or Mike Ybarguen, Dan Olmstead or Layne Dodson, or the staff listed below if you have any suggestions.

Lastly I am sending to you two signed copies of the above contract. Would you please sign both, keep one for your own files and return the other to Sharon Carter along with the required Certificate of Insurance as described in section 9(e) of this document.

Sincerely,

PO Box 70
Boise,

Susan Piper Grey
Community Relations Leader, Corporate Headquarters

- Ontario: Pat Sullivan, Gaylen Moran
- Nampa: Jim Jauregui
- Boise: Bruce Cleveland, Blake Watson, Rusty Kirtley, Arden Davis
- Twin Falls: Jim Mason, Bob Rubel, Mike Pohanka
- Pocatello: Marsha Losser, Glenn Stokes, Gary Moldenhauer, Mark Lupo



An IDACORP Company

IDAHO POWER COMPANY
P.O. BOX 70
BOISE, IDAHO 83707Jon Roholt
Delivery Services Leader
Idaho Power, Box 70, Boise, ID 83707
(208) 388-2752

1/3/01

Ken Robinette
South Central Community Action Agency
726 Shoshone St.
Twin Falls, ID 83303-0531**RE: 2001 SCCAA LIWA Contract**

Enclosed is the 2001 Low-Income Weatherization Assistance Program contract from Idaho Power.

- The term of the contract is for the calendar year beginning January 1st and ending December 15th, 2001.
- There is a change in the amount of the funding for Non-Profit Program Funds. Each agency may apply for money to be used from this fund which will be awarded at the discretion of IPCo. It is on a first come first served basis. The amount for 2001 is \$15,000 and all 5 Idaho Agencies may apply.
- This year, we used only residential customer counts in your service territory to determine your specific allocation of moneys along with consideration of the percent of population below poverty based in the 1990 Census.
- Again, this year, the SIR (savings to investment ratio) is changed to 1.1 or greater.
- Adjustments which listed the unallowables of installing plastic window coverings and repair or replacement of fossil fuel heating have been eliminated.

We welcome suggestions you may have on how to improve and bring more value to the customers we all serve. Please contact myself, Sharon Carter or Pat Sullivan or the staff listed below if you have any suggestions.

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Sincerely,

Jon D. Roholt
Delivery Services Leader

COC: Jim Jauregui
Boise: Blake Watson, Bruce Cleveland, Arden Davis
Twin Falls: Jim Mason, Mike Pohanka
Pocatello: Marsha Losser, Mark Lupo
Regional Managers: Denny Trumble, Keith Kolar, Kevin Whittier, Perry VanPatten
Corporate: Jerry Nielson and Jim Baggs
Legal: Larry Ripley and Ric Gale



**IDAHO
POWER**

An IDACORP Company

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P.O. BOX 70
BOISE, IDAHO 83707

Jon Roholt
Delivery Services Leader
Idaho Power, Box 70, Boise, ID 83707
(208) 388-2752

3/22/01

Mr. Ken Robinette
ICAA Energy Sub-Committee Chair
P.O. Box 8224
Boise, ID 83707

*2001/CONTRACT
Added Money
MAR 23 2001*

RE: 2001 LIWA Funding Increase

In response to your request for additional Low-Income Weatherization Assistance Program funding, and the anticipated need of assistance to Idaho Power customers, Idaho Power is pleased to inform you that it has increased funding for year 2001 by \$100,000.

The additional funds have been distributed to the member agency accounts following existing allocation methods and will be available immediately. All terms under the current contract apply.

Idaho Power values its customers and appreciates the different options available to assist customers with their energy needs. We would like to assess the needs of our customers throughout the year and appreciate any insight you may have. Please contact myself or Sharon Carter if you have any questions.

Attached is an enclosure showing how these funds have been allocated to the Idaho Agencies.

Sincerely,

Jon D. Roholt
Delivery Services Leader

- COC: Jim Jauregui
- Boise: Blake Watson, Bruce Cleveland, Arden Davis
- Twin Falls: Jim Mason, Mike Pohanka
- Pocatello: Marsha Losser, Mark Lupo
- Regional Managers: Pat Hasenoerhl, Keith Kolar, Kevin Whittier, Perry VanPatten
- Corporate: Denny Trumble, Warren Kline, Jerry Nielson, and Jim Baggs
- Legal: Larry Ripley and Ric Gale

c: ICAA Agencies:

- | | | |
|--|--|--|
| Vivian Bristol and Ron Corta
Canyon County on Aging
304 N Kimball
Caldwell, ID 83605 | James Hall and Brad Simmons
Eastern Idaho Special Services Agency
PO Box 51098
Idaho Falls, ID 83405 | Ken Robinette
South Central Community Action
Agency
726 Shoshone St.
Twin Falls, ID 83303-0531 |
| Attn: Dick Henry and Kevin Viggers
EL-Ada, Inc.
701 E 44 th St
Boise, ID 83714 | Attn: Pam Mc Kinley and Rick Burgin
Southeast Idaho Community Action Agency
PO BOX 940
641 North 8th
Pocatello, ID 83201 | |

MAR 23 2001

2001
LIWA Dollars

Agency	2001 Original Program Funds	Non-Profit Pool	Customer Count	% of Population below poverty line	Customer est. below poverty line	2001 New Funds	2001 Total Program Funds
EL-ADA, Elmore & Ada Counties,	\$1,619	eligible for non-profit pool	128307	17.15%	22005	\$14,851,000	\$14,852,619
CCOA-Canyon County on Aging	\$6,979	eligible for non-profit pool	82870	16.33%	13533	\$21,276,000	\$28,255,979
SCCA-SouthCentral Community Action Agency	\$10,999	eligible for non-profit pool	55218	14.10%	7786	\$15,698,000	\$26,697,999
SEICA-South Eastern Idaho Community Action,	\$2,674	eligible for non-profit pool	40222	14.16%	5695	\$11,479,000	\$14,153,674
EISSA-Eastern Idaho Special Services Agency	\$2,273	eligible for non-profit pool	3800	15.68%	596	\$1,201,000	\$3,474,273
Idaho Agencies Allocation Subtotal:	\$19,534		310417		49614	\$100,000	\$297,534
Idaho Non Profit Pool	\$15,000					NA	\$15,000
Total Idaho Funds	\$212,534						\$312,534
Malheur Council on Aging	\$23,091					NA	\$23,091
Oregon Total Funds	\$23,091	not eligible for non-profit pool	10856	NA	NA	NA	\$23,091
ID & OR TOTAL PROGRAM FUNDS							\$335,625

Allocation Assumptions:

- Used Residential Customer Count only
- Backed out Oregon Customers: (Vale, Ontario, and Nyssa, 10,856)
Customer Used to base FPL on: 310417
- Backed out Oregon dollars: 23,091 and 15,000 non profit pool money
- Weatherization done per residence per meter.



An IDACORP Company

IDAHO POWER COMPANY
P.O. BOX 70
BOISE, IDAHO 83707

COPY JAN 05 2001

Jon Roholt
Delivery Services Leader
Idaho Power, Box 70, Boise, ID 83707
(208) 388-2752

1/3/01

Ken Robinette
South Central Community Action Agency
726 Shoshone St. -
Twin Falls, ID 83303-0531

RE: 2001 SCCAA LIWA Contract

Enclosed is the 2001 Low-Income Weatherization Assistance Program contract from Idaho Power.

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- There is a change in the amount of the funding for Non-Profit Program Funds. Each agency may apply for money to be used from this fund which will be awarded at the discretion of IPCo. It is on a first come first served basis. The amount for 2001 is \$15,000 and all 5 Idaho Agencies may apply.
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Sincerely,

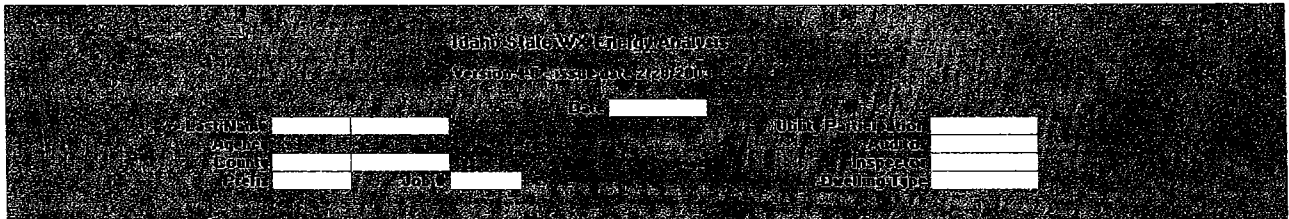
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Legal: Larry Ripley and Ric Gale

EA4 - Computerized Energy Audit Data Entry

Data entry of all turquoise colored cells should be done first. Turquoise colored cells denote the minimum data entry that is required to successfully calculate most items on the sheet. If the turquoise cells are entered first, then as Invest, CFM/50, Material, Area, Exist U and Prop U are entered from left to right, calculated values will appear (SIR, Savings BTU, etc.). If the turquoise cells are not entered first, then the error indicator "#DIV/0" will appear in those cells where calculation is occurring where a division by 0 (zero) is included in the formula.

Heading Information

The image shows a scan of a data entry form. The text is very dark and difficult to read, but some labels and input fields are visible. Labels include "Date", "Last Name", "Agency", "County", "Prefix", "Job#", "Utility Participation", "Auditor", "Inspector", and "Dwelling Type". There are several rectangular input fields, some of which are empty and some which contain text. The form appears to be a header section for a larger data entry sheet.

Date – enter the data entry date of the audit (01/01/2001) note: will display as 1/1/01

Last Name – enter the Client's last name (Doe)

Agency – entry should already be displaying your Agency's name (CAP)

County – enter the County in which the Client resides (Idaho)

Prefix – enter the Prefix, if you Agency uses one (A)

Job# – enter the Job# (1111) note: do not enter alpha characters use Prefix for alpha characters

Utility Participation – enter the Utility's name if there is Utility Participation (IP, BPA, etc.)

Auditor – enter the Auditor's initials (JD)

Inspector – enter the Inspector's initials (RJ)

Dwelling Type – enter the type of Dwelling according to the following:

- 1 = Mobile Home
- 2 = Single Family
- 3 = Multi-Family three or less
- 4 = Multi-Family four or more

Additional Notes: Heading data entries must be consistent for proper reporting of completions, i.e. County, Utility Participation, Auditor and Inspector are fields that are added to existing data and therefore should be consistent, as agreed upon between the State and the Agencies.

Windows Section

All window areas and U-values must be entered whether or not corrective measures are to be taken.

1. If windows are not to be treated, areas may be combined if U-values are the same.
2. If U-values are not the same, each window area must be entered separately, showing the different values.
3. If windows are to be treated, areas may be combined if the existing and proposed U-values are the same.

	CFM/50	Condition	Material	Labor	Area	Prop U	Exist U	Savings BTU	Total BTU Savings %	Exist BTU	Prop BTU
Window											
Repair											
Storm											
Storm											

Investment – leave blank or enter 1, 2, 3, 4, or 5 according to the following:

blank = Agency 100% of cost

1 = Utility 100% of cost

2 = Utility 50% of cost

3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

4 = Private 100% of cost

5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

CFM/50 or Condition – enter a 1 to increase savings due to reduction in AC/Hr (1)

Material – enter the dollar amount of the individual line’s material investment (121.43)

Labor – labor values will automatically calculate in the gray colored cells for windows installed by Agency crews and you enter actual contractor labor costs (235.65) within the white colored cells for windows installed using a contractor

Area – enter the total square footage of the individual line’s window(s) (18)

Exist U – enter the appropriate U value from the Windows U Value chart(s) provided by the State (1.13)

Prop U – enter the appropriate U value from the Windows U Value chart(s) provided by the State (.31)

Additional Notes: Individual lines are supplied for the entry of Replacement and Storm windows because the labor factors for each are different, enter the individual or grouping of like U valued windows on the appropriate line. After entry of Exist and Prop U values (if all turquoise colored cells have been data entered properly), then S-I-R, Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item’s row.

Doors Section

All door areas and U-values must be entered whether or not corrective measures are to be taken.

1. If doors are not to be treated, areas may be combined if U-values are the same.
2. If U-values are not the same, each door area must be entered separately, showing the different values.
3. If doors are to be treated, areas may be combined if the existing and proposed U-values are the same.

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

- blank = Agency 100% of cost
- 1 = Utility 100% of cost
- 2 = Utility 50% of cost
- 3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment
- 4 = Private 100% of cost
- 5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

CFM/50 or Condition – enter a 1 to increase savings due to reduction in AC/Hr (1)

Material – enter the dollar amount of the individual line’s material investment (142.43)

Labor – labor values will automatically calculate in the gray colored cells for doors installed by Agency crews and you enter actual contractor labor costs (227.65) within the white colored cells for doors installed using a contractor

Area – enter the total square footage of the individual line’s doors(s) (18)

Exist U – enter the appropriate U value from the Doors U Value chart(s) provided by the State (1.13)

Prop U – enter the appropriate U value from the Doors U Value chart(s) provided by the State (.06)

Additional Notes: After entry of Exist and Prop U values (if all turquoise colored cells have been data entered properly), then S-I-R, Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item’s row.

Walls Section

All exterior wall areas, less window and door areas, must be entered whether or not corrective measures are to be taken.

Walls separating the conditioned space from an enclosed but unconditioned porch or attached garage are considered "buffered" walls.

1. If walls are not to be treated, areas may be combined if U-values are the same.
2. If U-values are not the same, each wall area must be entered separately, showing the different values.
3. If walls are to be treated, areas may be combined if the existing and proposed U-values are the same.

Investment Condition	Material	Labor	Area	Exist U	Prop U	S-I-R	Total BTU Savings	Exist BTU	Prop BTU
		300					0.000		
		0.00					0.000		
		0.00					0.000		
		0.00					0.000		
		0.00					0.000		
		0.00					0.000		
		0.00					0.000		
		0.00					0.000		

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

- blank = Agency 100% of cost
- 1 = Utility 100% of cost
- 2 = Utility 50% of cost
- 3 = Utility provides the amount entered into "Partial Investment Amount" (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one "3" should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment
- 4 = Private 100% of cost
- 5 = Private provides the amount entered into "Partial Investment Amount" (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one "5" should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

CFM/50 or Condition – enter a 1 to indicate that the wall is a "buffered" wall (1), leave blank if the wall is not buffered, see above for definition of buffered wall

Material – enter the dollar amount of the individual line's material investment (2121.34)

Labor – labor values will automatically calculate in the gray colored cells for walls insulated by Agency crews and you enter actual contractor labor costs (315.55) within the white colored cells for walls insulated using a contractor

Area – enter the total square footage of the individual line's wall(s) (18)

Exist U – enter the appropriate U value from the Walls U Value chart(s) provided by the State (2.81)

Prop U – enter the appropriate U value from the Walls U Value chart(s) provided by the State (.029)

Additional Notes: After entry of Exist and Prop U values (if all turquoise colored cells have been data entered properly), then S-I-R, Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item's row.

Ceilings Section

All attic areas must be entered whether or not corrective measures are to be taken.

1. If ceilings are not to be treated, areas may be combined if U-values are the same.
2. If U-values are not the same, each ceiling area must be entered separately, showing the different values.
3. If ceilings are to be treated, areas may be combined if the existing and proposed U-values are the same.

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

blank = Agency 100% of cost

1 = Utility 100% of cost

2 = Utility 50% of cost

3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

4 = Private 100% of cost

5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

Material – enter the dollar amount of the individual line’s material investment (146.63)

Labor – labor values will automatically calculate in the gray colored cells for ceilings insulated by Agency crews and you enter actual contractor labor costs (248.05) within the white colored cells for ceilings insulated using a contractor

Area – enter the total square footage of the individual line’s ceiling(s) (18)

Exist U – enter the appropriate U value from the Ceiling U Value chart(s) provided by the State (.292)

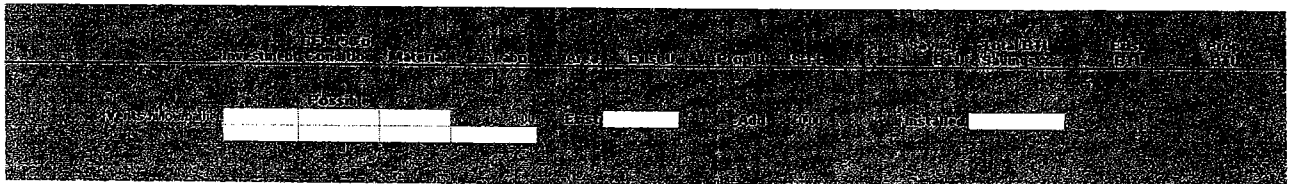
Prop U – enter the appropriate U value from the Ceiling U Value chart(s) provided by the State (.023)

Additional Notes: After entry of Exist and Prop U values (if all turquoise colored cells have been data entered properly), then S-I-R, Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item’s row.

Vents Section

All existing ventilation is to be reported whether or not corrective measures are to be taken.

1. Enter a (1) into the "Condition" column when: If high/low vents are present; it is possible to install high/low venting; if there is a ceiling vapor barrier. This will reduce the required net free venting from "1/150" to "1/300".
2. The total square feet of existing net free attic ventilation must be entered.
3. Additional square feet of net free ventilation installed must also be entered.



Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

blank = Agency 100% of cost

1 = Utility 100% of cost

2 = Utility 50% of cost

3 = Utility provides the amount entered into "Partial Investment Amount" (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one "3" should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

4 = Private 100% of cost

5 = Private provides the amount entered into "Partial Investment Amount" (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one "5" should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

CFM/50 or Condition – enter a 1 to indicate existing venting condition, see 1. above (1)

Material – enter the dollar amount of the individual line's material investment (72.10)

Labor – labor values will automatically calculate in the gray colored cells for venting installed by Agency crews and you enter actual contractor labor costs (115.16) within the white colored cells for venting installed using a contractor

Exist – enter the existing square footage of net free ventilation (1.75)

Prop – will display the proposed square footage of net free ventilation that need to be installed

Installed – enter the total square footage of net free ventilation installed

Additional Notes: After entry of all ceiling area(s) and if Condition is 1 on either venting line, "Add" (net free ventilation area) will be calculated (if all turquoise colored cells have been data entered properly). Then, if "Installed" (net free ventilation area) is entered, labor costs, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item's row.

Floors Section

All floor areas must be entered whether or not corrective measures are to be taken. A buffering factor of .5 is automatically included to the heat loss formulas:

1. Enter a (1) into the "Condition" column on a tight line(s), if the foundation wall is a solid continuous barrier between the crawl space and the elements. This will reduce the buffer factor to a .4.
2. Enter a (1) into the "Condition" column on an open line(s), if the crawl space is open to the elements. This will reduce the buffer factor to .6.
3. When floor area represents slab on grade or conditioned basement, F-values are to be entered and area is to be expressed in lineal feet, not square footage.

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

blank = Agency 100% of cost

1 = Utility 100% of cost

2 = Utility 50% of cost

3 = Utility provides the amount entered into "Partial Investment Amount" (Q138) under

Utility Investment section, this allows you to hit an exact total dollar

investment amount for Utility, only one "3" should appear on any job

and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

4 = Private 100% of cost

5 = Private provides the amount entered into "Partial Investment Amount" (I138) under

Private Investment section, this allows you to hit an exact total dollar

investment amount for Private, only one "5" should appear on any job

and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

CFM/50 or Condition – enter a 1 on the appropriate row to indicate whether floor is "open" or "tight", see 1. and 2. above and enter only on the appropriate row to express existing conditions

Material – enter the dollar amount of the individual line's material investment (216.38)

Labor – labor values will automatically calculate in the gray colored cells for floors insulated by Agency crews and you enter actual contractor labor costs (312.22) within the white colored cells for floors insulated using a contractor

Area – enter the total square footage of the individual line's floor(s) (18) or enter the linear footage for expression of an F value

Exist U – enter the appropriate U value from the Floors U Value chart(s) provided by the State (.238) or enter the appropriate F value from the Values for Below Grade Walls chart supplied by the State (.84) or enter the appropriate F value from the Concrete Slab Floor on Grade (.81)

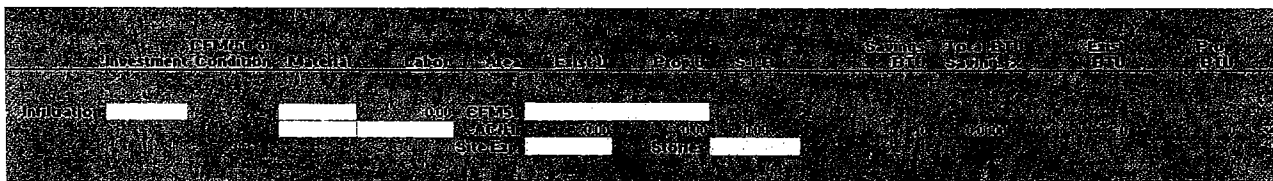
Prop U – enter the appropriate U value from the Floors U Value chart(s) provided by the State (.031) or enter the appropriate F value from the Values for Below Grade Walls chart supplied by the State (.61) or enter the appropriate F value from the Concrete Slab Floor on Grade (.55)

Additional Notes: After entry of Exist and Prop U values (if all turquoise colored cells have been data entered properly), then S-I-R, Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item's row.

Infiltration Section

CFM/50 flow rate information, Exist and Prop must be entered from blower door readings.

1. "CFM/50" is defined as the cubic feet per minute flow rate at a house pressure of 50 pascals.
2. The "natural" flow rate (AC/hr and cubic feet per minute per person formulas) takes into consideration both wind and stack effects.
3. Site Exp. should be entered as follows:
 - 1.5 for a house exposed to the elements, no building or trees close by (very exposed)
 - 1 for a house in normal conditions, some trees or buildings close by (average exposure)
 - .5 for a house that is shielded by buildings or trees, close by on at least three sides (minimal exposure)
4. Stories should be entered simply as the number of stories of the house (1) (1.5) (2) and so on



Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

- blank = Agency 100% of cost
- 1 = Utility 100% of cost
- 2 = Utility 50% of cost
- 3 = Utility provides the amount entered into "Partial Investment Amount" (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one "3" should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment
- 4 = Private 100% of cost
- 5 = Private provides the amount entered into "Partial Investment Amount" (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one "5" should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

Material – enter the dollar amount of the individual line's material investment (47.36)

Labor – labor values will automatically calculate in the gray colored cells for infiltration measures installed by Agency crews and you enter actual contractor labor costs (102.63) within the white colored cells for infiltration measures installed using a contractor

CFM50 Exist – enter the appropriate blower door reading (2850)

CFM50 Prop – enter the appropriate blower door reading (1500)

Site Exp. – enter the appropriate site exposure rating, see 3. above (.5, 1, 1.5)

Stories – enter the appropriate number of stories, see 4. above (1, 1.5, 2)

Additional Notes: After entry of Exist CFM/50 readings, minimum, maximum and cautionary CFM/50 readings will be generated and after site exposure and stories are entered (if all turquoise colored cells have been data entered properly), then S-I-R, Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item's row.

Ducts Section

Existing ducts should be entered in lineal feet whether or not corrective measures are to be applied.

1. Duct systems are automatically considered un-insulated and located in an unconditioned space(s).
2. Ducts should be entered on the appropriate line, denoting whether they are supply or return.
 1. Enter (1) into the "Insulated" column for ducting that is insulated (supply, return or in conditioned space(s) as appropriate).
3. Enter the lineal feet only when ducting is/are not insulated and cannot be insulated.

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

- blank = Agency 100% of cost
- 1 = Utility 100% of cost
- 2 = Utility 50% of cost
- 3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment
- 4 = Private 100% of cost
- 5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

CFM/50 or Condition – enter a 1 on the appropriate row to indicate whether ducts are insulated

Material – enter the dollar amount of the individual line’s material investment (86.13)

Labor – labor values will automatically calculate in the gray colored cells for ducts insulated by Agency crews and you enter actual contractor labor costs (122.75) within the white colored cells for ducts insulated using a contractor

Area – enter the total lineal feet of the appropriate duct as denoted on the rows (48)

Additional Notes: After entry of linear feet of ducts (if all turquoise colored cells have been data entered properly), then S-I-R, Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item’s row.

Health & Safety Section

This section is for reporting health and safety information not covered elsewhere.

1. Where an area, already insulated, requires further venting and/or moisture control measures (exhaust fan, ground cover, etc.).
2. Minor structural repairs required to protect weatherization materials.
3. Minor electrical repairs: fuse/circuit breaker replacement; repair connections, etc.
4. Minor plumbing repairs (replace/repair leaking pipe, elbow, union, etc.) to protect weatherization materials.

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

- blank = Agency 100% of cost
- 1 = Utility 100% of cost
- 2 = Utility 50% of cost
- 3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment
- 4 = Private 100% of cost
- 5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

Material – enter the dollar amount of the individual line’s material investment (36.14)

Labor – labor values will automatically calculate in the gray colored cells for Health and Safety work completed by Agency crews and you enter actual contractor labor costs (75.00) within the white colored cells for Health and Safety work completed using a contractor

Area – If applicable, enter the total square footage of the individual line (40)

Exist U – If applicable, enter the appropriate U value from the Windows, Doors, Walls, Ceilings, or Floors U Value chart(s) provided by the State (.238, .042, 1.13, etc.) although no values are needed to represent “repairs”, as defined by DOE, within the Health and Safety Section and expenditures expressed here are not subject to S-I-R requirements and no S-I-R is calculated

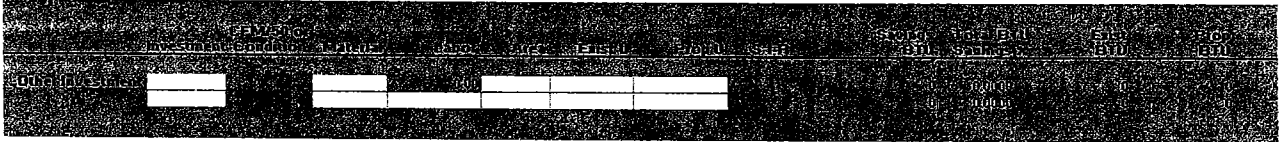
Prop U – If applicable, enter the appropriate U value from the Windows, Doors, Walls, Ceilings, or Floors U Value chart(s) provided by the State (.238, .042, 1.13, etc.) although no values are needed to represent “repairs”, as defined by DOE, within the Health and Safety Section and expenditures expressed here are not subject to S-I-R requirements and no S-I-R is calculated

Additional Notes: After entry of Area, Exist and Prop U values (if all turquoise colored cells have been data entered properly), then Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly, if applicable. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item’s row. If an improvement in U value resulted from the repairs done then the Savings BTU etc. will calculate.

Other Investment Section

This section is for reporting other investment information not covered elsewhere.

1. Where investment in the home is from other sources than the State WAP funding.



Investment – 4 or 5 according to the following:

4 = Private 100% of cost

5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

Material – enter the dollar amount of the individual line’s material investment (291.36)

Labor – labor values will automatically calculate in the gray colored cells for Other Investment work completed by Agency crews and you enter actual contractor labor costs (62.50) within the white colored cells for Other Investment work completed using a contractor

Area – If applicable, enter the total square footage of the individual line (40)

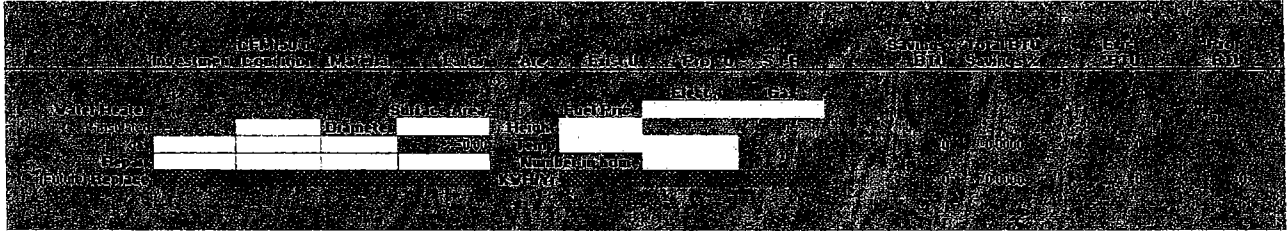
Exist U – If applicable, enter the appropriate U value from the Windows, Doors, Walls, Ceilings, or Floors U Value chart(s) provided by the State (.238, .042, 1.13, etc.) although no values are needed to represent expenditures in this section where non WAP funds are represented and are not subject to S-I-R requirements and no S-I-R is calculated

Prop U – If applicable, enter the appropriate U value from the Windows, Doors, Walls, Ceilings, or Floors U Value chart(s) provided by the State (.238, .042, 1.13, etc.) although no values are needed to represent expenditures in this section where non WAP funds are represented and are not subject to S-I-R requirements and no S-I-R is calculated

Additional Notes: After entry of Area, Exist and Prop U values (if all turquoise colored cells have been data entered properly), then Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly, if applicable. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item’s row. If an improvement in U value resulted from the Other Investment work done, then the Savings BTU etc. will calculate.

Water Heater Section

1. Water heaters are automatically considered electric and located in an unconditioned area.



Fuel Price – enter the water heater’s fuel source cost, electric or gas under the appropriate heading Elect or Gas (.071, 1.02)

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

blank = Agency 100% of cost

1 = Utility 100% of cost

2 = Utility 50% of cost

3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

4 = Private 100% of cost

5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

CFM/50 or Condition – enter a 1 in the “Condition” column on the row identified as “insulated” to indicate an existing, insulated water heater and/or enter a 1 on the row identified as “gas” to indicate an existing gas water heater and/or enter a 1 on the row identified as “repair” to indicate repair expenditures for the water heater (Future ... or enter a 1 on the row identified as “replace” to indicate replacement expenditures for a new water heater)

Material – enter the dollar amount of the individual line’s material investment (14.38)

Labor – labor values will automatically calculate in the gray colored cells for water heater work completed by Agency crews and you enter actual contractor labor costs (52.50) within the white colored cells for water heater work completed using a contractor

Diameter – enter the diameter of the water heater in inches (15)

Height – enter the height of the water heater in inches (50)

Exist Temp – enter the water heater's existing temperature setting (145)

Prop Temp – enter the water heater's proposed temperature setting (120)

Number in home – enter the number of people in the home (6)

Exist KWH/Yr – (future ... enter existing KWH/Yr figure that is produced by running DOE's water heater replacement program, actual program is currently due for release sometime in 2003) (2185)

Prop KWH/Yr – (future ... enter proposed KWH/Yr figure that is produced by running DOE's water heater replacement program, actual program is currently due for release sometime in 2003) (1550)

S-I-R – (future ... enter S-I-R that is produced by running DOE's water heater replacement program, actual program is currently due for release sometime in 2003) (1.01)

Additional Notes: After entry of fuel source, diameter, height, temperature, number in home, material and labor costs if applicable (if all turquoise colored cells have been data entered properly), Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item's row. The number in home is used not only for calculating water usage and its related energy savings but also for calculating target, minimum and cautionary cfm/50 flow rates as established by ASHRAE for the Infiltration and CFM/50 Sections.

Pipes Section

The lineal feet of existing water pipe should be entered whether or not corrective action is to be taken.

1. Water pipes are automatically considered un-insulated and located in an unconditioned space.

CFM/50 or Condition	Material	Labor	Area
1	0.000	0.000	0.000
1	0.000	0.000	0.000
1	0.000	0.000	0.000

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

blank = Agency 100% of cost

1 = Utility 100% of cost

2 = Utility 50% of cost

3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

4 = Private 100% of cost

5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

CFM/50 or Condition – enter a 1 on the appropriate row to indicate whether pipes represented are “insulated” or in a “conditioned” space,

Material – enter the dollar amount of the individual line’s material investment (21.43)

Labor – labor values will automatically calculate in the gray colored cells for pipes insulated by Agency crews and you enter actual contractor labor costs (45.00) within the white colored cells for pipes insulated using a contractor

Area – enter the total lineal feet of the pipes as denoted on the appropriate row (65)

Additional Notes: After entry of lineal feet of pipes (if all turquoise colored cells have been data entered properly), then S-I-R, Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item’s row.

Refrigerator Replacement Section

Data entry (Exist KWH/Hr, Prop KWH/Hr and S-I-R) for use in this section is produced from an Access 2000 program developed by DOE that uses tables of manufacturer and model numbers from refrigerators to evaluate existing and proposed KWH/Yr (Energy Star ratings), taking into account the expected lifetime and appropriate discount factors in the calculation of a S-I-R. The program (Replace Refrig-Access 2000.mdb) must be run in Access 2000 or later, the program is free for downloading at:

<http://www.waptac-pic.org/baseload/analysis.htm> and procedures at
<http://www.waptac-pic.org/BaseLoad.htm> along with supporting documentation at
<http://www.waptac-pic.org/baseload/files/Toolkit07.PDF> and
<http://www.waptac-pic.org/baseload/files/FrigreplaceWX.pdf> as well as other refrigerator energy use data at
<http://www.waptac-pic.org/baseload/refrigdata.htm>.



Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

- blank = Agency 100% of cost
- 1 = Utility 100% of cost
- 2 = Utility 50% of cost
- 3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment
- 4 = Private 100% of cost
- 5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

Material – enter the dollar amount of the replacement refrigerator’s material investment (420.00)

Labor – enter actual Agency or contractor labor costs within the white colored cells for the refrigerator replacement (135.00)

Exist KWH/Yr – enter the KWH/Hr figure that is produced by running Replace Refrig-Access 2000.mdb as developed by D&R International, Ltd., for DOE to establish an existing KWH/Yr (2250)

Prop KWH/Yr – enter the KWH/Hr figure that is produced by running Replace Refrig-Access 2000.mdb as developed by D&R International, Ltd., for DOE to establish a proposed KWH/Yr (1250)

S-I-R – enter the S-I-R figure that is produced by running Replace Refrig-Access 2000.mdb as developed by D&R International, Ltd., for DOE to establish an existing KWH/Yr (1.36)

Additional Notes: After entry of Exist and Prop KWH/Yr as well as S-I-R (if all turquoise colored cells have been data entered properly), then Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item’s row.

Furnace Section

Existing and proposed seasonal efficiencies, "Seas Eff" must be entered whether or not corrective action is to be taken, even if a furnace replacement is proposed.

1. If no measures are performed, enter the same figure for both existing and proposed seasonal efficiency.
2. If "tune-up" or "modify" measures are performed and results in improved efficiency, enter the final proposed seasonal efficiency after work is completed and the unit's seasonal efficiency is documented with a field test.
3. If repairs are being represented, enter the same existing and proposed seasonal efficiency on either the tune-up or modify line

Item	Investment	Material	Labor	Exist Seas Eff	Prop Seas Eff	Savings BTU	Total BTU Savings %	Exist BTU	Prop BTU

Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

- blank = Agency 100% of cost
- 1 = Utility 100% of cost
- 2 = Utility 50% of cost
- 3 = Utility provides the amount entered into "Partial Investment Amount" (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one "3" should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment
- 4 = Private 100% of cost
- 5 = Private provides the amount entered into "Partial Investment Amount" (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one "5" should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

Material – enter the dollar amount of the individual line's material investment (157.43)

Labor – enter actual Agency or contractor labor costs within the white colored cells for furnace work completed on the unit (175.00)

Exist Seas Eff – enter the appropriate seasonal efficiency value from the Heating Systems Seasonal Efficiencies Value chart(s) provided by the State (.10)

Prop Seas Eff – enter the appropriate seasonal efficiency value from the Heating Systems Seasonal Efficiencies Value chart(s) provided by the State (2.00)

Additional Notes: Enter data on the appropriate line for "tune-up", "modify" or "repair" as applicable but only on one row. After entry of Exist Seas Eff and Prop Seas Eff (if all turquoise colored cells have been data entered properly), then S-I-R (except on repair row), Savings BTU, Total BTU Savings %, Exist BTU and Prop BTU should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries for the individual item's row.

Site Information, CFM/50, Furnace Replacement and Job Totals Section

Volume – enter the home’s volume in cubic feet (3733)

Elev – enter the appropriate elevation in feet from the Station/HDD/Elevation/Design Temperature chart(s) provided by the State or specific elevation sites may be provided by the agency. (2480)

HDD – enter the appropriate heating degree days from the Station/HDD/Elevation/Design Temperature chart(s) provided by the State (2480)

Des Temp – enter the appropriate design temperature from the Station/HDD/Elevation/Design Temperature chart(s) provided by the State (2480)

Fuel Price – enter only the client’s primary fuel source’s price under the appropriate “Elect”, “Gas”, “Wood”, “Oil”, “Coal” or “Propane” label (price to be agreed upon between the State and Agency or as provided by a vendor receipt/documentation received from the client) (.065, 1.02, 95.00, 1.85, 110.00, 1.95)

Audit Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

blank = Agency 100% of cost

1 = Utility 100% of cost

2 = Utility 50% of cost

3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

4 = Private 100% of cost

5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

BTU input of Open Combustion Appliance – enter the BTU input of any open combustion appliance located in the conditioned space of the home as identified on the appliance’s label, serial plate or other such manufacturer/model information directly related to the unit (15000)

Replacement – enter a 1 if the client’s primary furnace is being replaced
Health & Safety – enter a 1 if the furnace replacement is Health and Safety related
Investment – leave blank or enter 1, 2, 3, 4 or 5 according to the following:

- blank = Agency 100% of cost
- 1 = Utility 100% of cost
- 2 = Utility 50% of cost
- 3 = Utility provides the amount entered into “Partial Investment Amount” (Q138) under Utility Investment section, this allows you to hit an exact total dollar investment amount for Utility, only one “3” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment
- 4 = Private 100% of cost
- 5 = Private provides the amount entered into “Partial Investment Amount” (I138) under Private Investment section, this allows you to hit an exact total dollar investment amount for Private, only one “5” should appear on any job and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment

Seasonal Eff – enter the appropriate seasonal efficiency value for the replacement furnace from the Heating Systems Seasonal Efficiencies Value chart(s) provided by the State (2.00)
Material Cost – enter the material dollar amount of the furnace replacement (425.00)
Labor Cost – enter the labor dollar amount of the furnace replacement (550.00)
Fuel Price – enter the price of the replacement furnace’s fuel source besides the appropriate fuel source label “Elect”, “Gas”, “Wood”, “Oil”, “Coal” or “Propane” label (price to be agreed upon between the State and Agency or as provided by a vendor receipt/documentation received from the client) (.065, 1.02, 95.00, 1.85, 110.00, 1.95)
Actual Hrs – enter the total “production” hours for Agency crew(s) needed to complete all work on the home, as defined by the State (32)
Contract Labor – enter the total of all contractor labor costs expressed in EA4 (283.00)
Client Income – enter the Client’s annual income as documented on the WAP application (12400)
Total Floor Area – enter the total square footage area represented in EA4 (539)
Actual Energy Use Exist – enter annual energy used by client’s primary heating source as estimated/directed by the State or documented by actual Utility billing information if available (2035)

Additional Notes: After entry of all data (if all turquoise colored cells have been data entered properly), then Estimates of Total BTU Savings, CFM per Person Exist and Prop, CFM/50 Target/Minimum/Cautionary, Total Job S-I-R and other totaling in this section should display properly. If you do not see these numbers being generated, check data entry in the turquoise colored cells and in all cell entries within this section.

Private and Utility Section

Private Investment					Utility Investment				
Job	Material	Labor	Subcontract	Total	Job	Material	Labor	Subcontract	Total
1000	1000	1000	1000	4000	1000	1000	1000	1000	4000
2000	2000	2000	2000	8000	2000	2000	2000	2000	8000
3000	3000	3000	3000	12000	3000	3000	3000	3000	12000
4000	4000	4000	4000	16000	4000	4000	4000	4000	16000
5000	5000	5000	5000	20000	5000	5000	5000	5000	20000
6000	6000	6000	6000	24000	6000	6000	6000	6000	24000
7000	7000	7000	7000	28000	7000	7000	7000	7000	28000
8000	8000	8000	8000	32000	8000	8000	8000	8000	32000
9000	9000	9000	9000	36000	9000	9000	9000	9000	36000
10000	10000	10000	10000	40000	10000	10000	10000	10000	40000
11000	11000	11000	11000	44000	11000	11000	11000	11000	44000
12000	12000	12000	12000	48000	12000	12000	12000	12000	48000
13000	13000	13000	13000	52000	13000	13000	13000	13000	52000
14000	14000	14000	14000	56000	14000	14000	14000	14000	56000
15000	15000	15000	15000	60000	15000	15000	15000	15000	60000
16000	16000	16000	16000	64000	16000	16000	16000	16000	64000
17000	17000	17000	17000	68000	17000	17000	17000	17000	68000
18000	18000	18000	18000	72000	18000	18000	18000	18000	72000
19000	19000	19000	19000	76000	19000	19000	19000	19000	76000
20000	20000	20000	20000	80000	20000	20000	20000	20000	80000
21000	21000	21000	21000	84000	21000	21000	21000	21000	84000
22000	22000	22000	22000	88000	22000	22000	22000	22000	88000
23000	23000	23000	23000	92000	23000	23000	23000	23000	92000
24000	24000	24000	24000	96000	24000	24000	24000	24000	96000
25000	25000	25000	25000	100000	25000	25000	25000	25000	100000
26000	26000	26000	26000	104000	26000	26000	26000	26000	104000
27000	27000	27000	27000	108000	27000	27000	27000	27000	108000
28000	28000	28000	28000	112000	28000	28000	28000	28000	112000
29000	29000	29000	29000	116000	29000	29000	29000	29000	116000
30000	30000	30000	30000	120000	30000	30000	30000	30000	120000
31000	31000	31000	31000	124000	31000	31000	31000	31000	124000
32000	32000	32000	32000	128000	32000	32000	32000	32000	128000
33000	33000	33000	33000	132000	33000	33000	33000	33000	132000
34000	34000	34000	34000	136000	34000	34000	34000	34000	136000
35000	35000	35000	35000	140000	35000	35000	35000	35000	140000
36000	36000	36000	36000	144000	36000	36000	36000	36000	144000
37000	37000	37000	37000	148000	37000	37000	37000	37000	148000
38000	38000	38000	38000	152000	38000	38000	38000	38000	152000
39000	39000	39000	39000	156000	39000	39000	39000	39000	156000
40000	40000	40000	40000	160000	40000	40000	40000	40000	160000
41000	41000	41000	41000	164000	41000	41000	41000	41000	164000
42000	42000	42000	42000	168000	42000	42000	42000	42000	168000
43000	43000	43000	43000	172000	43000	43000	43000	43000	172000
44000	44000	44000	44000	176000	44000	44000	44000	44000	176000
45000	45000	45000	45000	180000	45000	45000	45000	45000	180000
46000	46000	46000	46000	184000	46000	46000	46000	46000	184000
47000	47000	47000	47000	188000	47000	47000	47000	47000	188000
48000	48000	48000	48000	192000	48000	48000	48000	48000	192000
49000	49000	49000	49000	196000	49000	49000	49000	49000	196000
50000	50000	50000	50000	200000	50000	50000	50000	50000	200000

Partial Investment Amount (under Private Investment) – enter the amount of money desired to be allocated to private investment as identified with a 5 in the “Investment” column of EA4. Only one 5 may appear on an entire Job to calculate total investments correctly and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment. Use this cell to round up to an exact Private Investment Total as calculated and displayed in the “Total” row in the lower section under “Private Investment”.

Partial Investment Amount (under Utility Investment) – enter the amount of money desired to be allocated to utility investment as identified with a 3 in the “Investment” column of EA4. Only one 3 may appear on an entire Job to calculate total investments correctly and should only be applied to a line item that is larger in total material and labor costs than the amount entered as a partial payment. Use this cell to round up to an exact Utility Investment Total as calculated and displayed in the “Total” row in the lower section under “Utility Investment”.

How to Create the CSV File from the XLS File

You can produce the csv file needed from EA4 for WITS, quite simply in spite of Microsoft's confusing and threatening interface. Once you have completed an audit on EA4 and saved the file, all the data that makes up the csv file should be displayed on the sheet labeled "EA4-CSV".

1. Select the EA4-CSV tab to go to that sheet, click File, Save As
2. Activate the drop down list box aligned with "Save as type:" (by clicking the down pointing triangle)
3. Scroll down to "CSV (Comma delimited)(* .csv) and click it. Note: If you have previously saved the EA4 file as say 4265.xls, then the name for the csv file will automatically be supplied and the csv file's name will be shown as 4265.csv.
4. Navigate (browse) to where you want to store the csv file and then click Save.
5. You will then receive a warning of sorts about, "... selected file type does not support workbooks that contain multiple sheets. ...", ignore the warning and click OK
6. You'll then be told that, "... 4265.csv may contain features that are not compatible with CSV (Comma delimited). Do you want to keep the workbook in this format? ...", be brave, ignore the warning and click Yes
7. Exit Excel but upon exiting, **DO NOT SAVE the file again!!!** Click "No" when asked, "Do you want to save the changes you made to 4265.csv?" and you will finally exit Excel.

Microsoft really designed a confusing interface for the saving of data into a comma delimited file format but if done successfully, you should now have both a 4265.xls and 4265.csv file. Process both files as you do now.

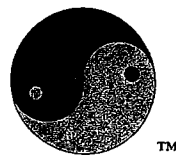
Common Data Entry Errors Discovered During Beta Testing of EA4

"#NAME!", "#DIV/0!" and "#VALUE!" error indicators happen when data entry errors have occurred. If you see the error indicator #NAME!, check your data entry for double periods, like an electricity rate of .0.65 or ..065. #NAME! indicates that Excel thinks that you are trying to give it a cell name (HDD) to go to instead of a legal cell reference (A1) and #Value! usually means that there is an alpha character in a numeric field, or even a blank space " " in an entry.

As mentioned earlier, a #DIV/0! error indicator is saying that somewhere in the cell's or cells' formula, a division is occurring using a 0 (zero). This will most likely happen if you don't enter all the data in the turquoise colored cells before you enter Material, Area, Exist U and Prop U or you have inadvertently entered a 0 as data entry. Remember that the format of some of the cells is a fixed number of decimal places so if data entry error occurs, say entering .065 as .00065, you may only see the value 0 in the cell.

Another time that you will see #DIV/0! is if you delete the material money or area from a line that still has Exist and Prop U values entered. EA4 was developed for data entry to occur as follows, all turquoise colored cells and then data on the individual measure rows (lines) from left to right. If you follow this pattern, then you will have immediate display of all the relevant calculations. If you complete an individual line's input and the calculated values don't show up immediately, that is an indicator that data entry is not correct on the line just entered.

When completing many EA4s together, it would probably be safest to open a new audit file from the original EA4.xls file for each job that you are entering. You can indeed delete all the data entry done by selecting the cells and hitting the delete or backspace keys. However, if you accidentally leave anything, even a blank space " " in a cell from the previous job, you will not be able to visibly see the data entry error causing the error indicator but EA4 will display the #VALUE! error indicator in numerous places. This error is especially hard to track down because it usually is not being caused by anything that you can visually see on the screen.



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