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SOUNDS ENERGETIC: THE RADIO PRODUCER'S
ENERGY MINIBOOK

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SOUNDS ENERGETIC:
THE RADIO PRODUCER'S ENERGY MINIBOOK

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INTRODUCTION

Energy. Thousands of radio hours have already been spent on the subject. Climbing utility rates. Gas lines again. Nuclear safety. OPEC price hikes. We've heard all about it.

Or have we?

How many people know that we could use 30 to 40 percent less energy than we do now without sacrificing our standard of living or that we could free ourselves from foreign oil by the end of the decade? (That's according to the Harvard Business School Energy Project.)

How many people know that they can cut their home heating costs nearly in half, use less electricity to keep their beer cold, and pull into the gas station less often? How many know that other people much like themselves -- not solar alchemists -- are harnessing nature's energy sources and relying less on depletable fuels?

The technical know-how is here. And the public is eager for good information. Energy hotlines, run by utilities and government agencies are getting hundreds of calls each day from people who want to know more about energy conservation and alternatives to high-priced energy.

Radio can inform and instruct, encourage and cajole, and rally the people. Broadcasters can let people know what they can do, not just what is being done to them. And radio can do so with flair. It can pump pride into community efforts to become more energy-efficient and it can de-mystify alternative technologies.

SUCCESS STORIES

A number of radio stations and producers across the country are finding that energy makes good radio. Some are carving out new time for energy; others are blending it into their regular format.

- Golden West Broadcasters in Los Angeles produced "Energy '80--One American Can Make a Difference," a series of 14 recorded messages by celebrities, each highlighting what one American has done to solve an energy problem without waiting for experts. "How-to" kits for developing community projects were sent to stations across the country.
- WOUB in Athens, Ohio produces "Chautauqua," a weekday call-in program on local self-reliance. Listener's who know how to do things like installing insulation share their knowledge with listeners who want advice. "Chautauqua" is tapping -- and taping -- a vital part of America's heritage: the folk knowledge that "sophisticated" urban dwellers lost when they left the farm.
- WILM in Wilmington, Delaware is beginning an energy forum series. The first show is a town meeting hosted by Harvard's Daniel Yergin, co-author of Energy Future, which will consist of four 10-minute presentations by experts on automobiles, solar, home weatherization and the house of the future. The presentations will be followed by 40 minutes of questions from town citizens. "Anyone who understands anything about energy knows we have a problem," says WILM's General Manager Sally Hawkins. "But for a lot of the public, it's just easier to sit around thinking they're being ripped off by the big companies."

- WMAL in Washington, D. C. promoted "Why Knot Day" to get office workers to take off their neckties and jackets so that air conditioners could be turned down without causing discomfort. A WMAL reporter was on the scene when the city's mayor abandoned his tie before hundreds of spectators in a downtown park.
- KSL in Salt Lake City sponsored an "Energy Idea House," a concrete example of how people can be comfortable with minimal backup heating and cooling just by building right in the first place.
- KINK in Portland, Oregon went one step further and promoted "The Street of Dreams," a design competition among local architects for energy-efficient homes. KINK also worked with civic groups to sponsor Solar Energy Day. The event brought Portlanders out to see sun-powered television, hear sun-powered music, and learn about the financial benefits of solar heating.
- KVEL in Vernal, Utah gave bicycles to its employees so they could use "American leg power, not foreign oil power," then offered free advertising to businesses that did the same.
- Top-ranked talk station KGO in San Francisco reports terrific public response to its numerous prime-time call-in shows on energy topics.

These are just a few examples of what can be done. But there's still much to be said and done about energy by stations of all formats. Your own energy programming efforts have probably stimulated your listeners' desires for more information. And you may have discovered in your community ascertainment process that energy is high on the public's list of concerns. But public understanding of energy lags far behind public concern. There is much your listeners want to know: information they can act upon right away, as well as new ideas about energy alternatives, such as sun, wind and wood, which are slowly but surely reaching the marketplace.

Your listeners are smart, but they're understandably confused. They know the energy situation is more than the moral equivalent of a cardigan sweater. They're looking for answers. They can get them from radio.

THE SOUNDS ENERGETIC CAMPAIGN

To meet your listeners' needs -- and your programming requirements -- you'll be opening new windows in your format or widening ones already cracked. The "Sounds Energetic" campaign can help you capitalize on the public's growing interest in and demand for information about energy. We'll work with you to develop new programming and off-air promotions that fit your station's format and tell your listeners what they can do about their particular energy problems:

- We'll give you program and promotion ideas based on what people in your market can do or are already doing to tackle energy inflation and waste. We'll suggest how these ideas can be used in PSA campaigns, talk shows, call-ins, features, quizzes and contests. We'll do the organizing and the research to make these ideas work for your station.
- We'll put you in touch with energy experts in your market that you may be unaware of, identify individuals and groups that can collaborate in your programming and promotional campaigns, alert you to energy-related events coming up that you may want to report on or attend, and supply you with a comprehensive list of energy information sources in your community and around the country.

- We'll provide you with detailed backgrounders about and sample scripts for features and spots on a variety of energy issues that concern your listeners. From suggestions on how to tackle a do-it-yourself home energy project to information on how to apply for federal funding to help start a neighborhood energy project. From consumer tips on how to save gas to editorials on your city's mass transit problems. From advice on whom to call if the heat's turned off to whom to call to join a major campaign for utility rate reform.
- We'll help you publicize whatever you decide to do, both locally and in national trade publications.

This Radio Producers' Energy Minibook is just the beginning. It's a working draft which will be expanded into the final Radio Producer's Energy Sourcebook -- with your help. The "Sounds Energetic" campaign staff of communications and energy experts and script writers will be hard at work over the next several months completing materials for the Sourcebook. But we need to work with you, as well as for you, to ensure that the programming and promotion ideas, energy backgrounders, local energy directories and sample scripts we produce reflect your needs and interests. We hope you will contact us with any suggestions you have for material and information that should be included in the Sourcebook, and look forward to working with you throughout the "Sounds Energetic" campaign.

CHAPTER ONE
ENERGY CHALLENGE/RADIO RESPONSE:
A CASE STUDY ON HOME ENERGY EFFICIENCY

Of all the energy your city consumes, about 40% is gobbled up by houses and apartments to heat and cool space, heat water and power appliances. Most of your listeners spend more than they need to for heating and air conditioning, yet many are less comfortable than they could be. Do-it-yourself projects and small cash investments can produce rapid, money-saving results for the individual by cutting out much of this waste. And your city's energy needs can be significantly reduced.

Why have most of your city's residents failed to take advantage of the obvious ways to plug their heat leaks, like insulating, caulking and weatherstripping? They don't believe they work. They don't know how to do them. They don't know whom to trust about the best way to tackle their problems. There are answers to these questions, and your station can provide them.

The following "case study" suggests programming and promotion ideas and sample scripts for a radio campaign that revolves around no-cost or low-cost steps your listeners can take to increase their home energy efficiency and save money. A variety of other energy topics and suggestions on ways to approach them are addressed in Chapter Two.

"SAVE A TENTH" RADIO CAMPAIGN

Your station can mount a major energy campaign for 1981 to reduce home energy use by one-tenth across the city. There are literally hundreds of topics that you can cover in features, talk shows, call-in programs, PSAs, contests, quizzes and off-air promotions. And information on do-it-yourself projects and low-cost improvements is just what your listeners have been waiting for.

Programming Ideas

- Provide a regular slot for a how-to-program. One month, for example, this "Radio Energy Workshop" might be devoted to hot water heaters: how they work, how much energy and money goes just for heating water, and how listeners can improve the efficiency of their hot water heaters by turning down the temperature setting, wrapping the unit with an insulation blanket, using night timers and installing faucet flow restrictors.
- Interview local consumer protection officials about the glut of "energy-saving" devices and services on the market. Which are effective, safe and affordable? Which should be avoided?
- Provide your listeners with information about and telephone contacts for the various home energy audit services offered in your area by local governments, utilities, nonprofit organizations and private companies. Chapter Three contains much of the information you'll need to pass on to your audience.
- Interview a home energy expert on the air about the kinds of services he provides and the typical energy-wasting problems he finds in many homes.

- Follow up by interviewing someone who has participated in a home energy audit program and is pleased with the steps taken in response. Conduct the interview several months after the house has been weatherized to discover if heat bills have gone down, drafts have been reduced and the house is more comfortable as a result. The home energy expert you've interviewed previously can supply you with the names of some of his past customers.
- Provide a regular "Call the House Doctor" slot on the air in which home energy experts answer listeners' called-in questions.
- Have an independent inspector tour a few homes in your area that have been weatherized under your city or county's free program for low-income residents. Interview him on the air. Is the work up to snuff? Has it been done professionally? Safely?
- Interview a low-income elderly person whose home has been weatherized under a city or county government program. Have his or her energy bills been cut? How has that improved his or her life -- is it now possible to buy meat or clothing more often than before the house was weatherized?
- Interview an expert from the National Association of Homebuilders (202-452-0200) or a local architectural firm or construction company about whether there are some common characteristics of the housing stock in your area that suggest common energy solutions. How were houses built in the 20's, 30's and 40's? What short-cuts have been taken in the past by home builders that made homes less energy efficient? What energy-related improvements are being built into new houses today? Can any generalities be made about what energy problems a home owner should look for?
- Do some comparison shopping by phone and then tell listeners where they can buy the best and most affordable hardware, wood stoves, wood, coal, insulation, storm windows and other energy-related products and services.
- Track down the oldest wood-burning stove company in your area and report on its recent business boom.
- Survey local wood sellers. Are the "cords" they sell really 4' X 4' X 8'?
- Tell your listeners whether wood or coal is the more efficient stove fuel, assuming a stove will accommodate both.
- Interview a chimney sweep about the hazards of wood and coal stoves and fireplaces, tips for cleaning and maintaining stoves and fireplaces, and the ups and downs of the job.
- Interview several doctors and other health professionals about the health benefits of keeping houses cooler and more humid in winter, rather than hot and dry.
- As New Year's Eve 1981 approaches, put together a radio town meeting on your city's energy situation. Announce the winners of the year's energy saving campaign, estimate the city-wide savings that resulted from each of these little steps at the household level, and provide call-in opportunities to air listeners' "New Year's Energy Resolutions" and their comments on the campaign's effect on their energy habits.

Promotion Ideas

- Assemble an Energy Kit from brochures and fact sheets about home energy efficiency available from local government agencies,

citizens groups, utilities and energy consulting firms. Inform listeners that they can receive the Energy Kit free by calling or writing the station. The Energy Kit's mailing envelope and folder can prominently display your station's logo and call letters.

- Offer an "Energy Saver Coupon" to listeners who request it by phone or postcard. The coupon would entitle listeners to a 10 percent discount on weatherizing materials at participating hardware and construction supply stores.
- Print up and send out a "1981 Energy Calendar", with your station's call letters prominently displayed, to listeners who request it. In addition to announcing community energy events and listing local sources of assistance with energy problems, each page of the energy calendar would suggest one or two energy-saving steps all listeners could take, starting with the easiest to do and cheapest (often free) and moving toward those that require a bit more investment and perhaps some technical assistance.
- Have participating listeners send in postcards describing the steps they've taken that were suggested in the energy kit or calendar. Ask your local newspapers to publish these names. If enough listeners respond, organize participants by area and set up neighborhood competitions. Energy-saver competitions could also be organized around hardware stores, church groups or civic organizations such as the Chamber of Commerce, Kiwanis Club, etc. As many groups as possible should be enlisted from the beginning of the campaign to participate and spread the word.
- Have a drawing from post cards submitted in response to a "Win a House Doctor Visit" contest. Award the winner a free home energy audit.
- Put together and distribute on request a "House Doctor Directory" listing home energy audit programs offered in your area. Again, Chapter Three will give you a head start on compiling such a short directory.
- Promote a neighborhood energy fair or "Hands-On Workshop," in collaboration with city agencies, energy experts, architects and builders, and suppliers. Local experts can exhibit and demonstrate an array of home energy-saving devices and techniques such as how to install attic insulation, caulking and weatherstripping, clock set-back thermostats, and other do-it-yourself projects.
- Produce and distribute lapel buttons on request, with slogans like "Energy: Turning Off is Catching On" and "Don't be an Energy Loser." Your station's logo and/or the name of your station's energy campaign can accompany the button's message.

Short Subjects: 15- and 30-Second Energy Spots

Many of the following "Did You Know..." facts can be used in several ways. You can wrap a short promotional tease for your energy campaign around them ("...Want to learn more about how you can save energy and money in your home? We'll be giving you some answers during our Energy '81 Campaign over the next month..."), or the facts can stand alone as 15- or 30-second spots.

DID YOU KNOW....

- That you spend about \$300 per year heating water with electricity, \$130 by gas, \$240 by oil, \$150 by heat pump. You can save money by turning down your water heater when you leave your house for the weekend or turning it off

when you go on vacation. You can save about \$20 or \$30 a year by reducing the water heater's thermostat from 140 or 160 degrees down to 130 degrees. If you have a dishwasher, the recommended hot water temperature is 140 degrees.

- Pilot lights on water heaters, furnaces, stoves and gas dryers use 5 to 10 percent of all natural gas burned in your home. By turning off your gas furnace's pilot light during the summer, you can save \$10 per year.
- Dust and excess paint on radiators, shelves on top of and cases built around radiators act as insulators that keep the heat from effectively reaching the room. You can get as much as 25% more heat from a clean, paint-free unenclosed radiator. If you install a sheet of metal or some aluminum foil behind your radiators, it will help them reflect heat into the room.
- Lighting amounts to about 15 percent of your home's total electric bill. Fluorescent lights are three to five times more efficient than incandescent bulbs. Turning off lights when you're not in the room does save energy. However, frequent switching on and off shortens the life of the lightbulb.
- Heat losses through and around windows and doors may be responsible for as much as 50 percent of your fuel bill.
- Quick showers use up to 50 percent less hot water than tub baths.
- When the house humidity is higher in the winter, you'll feel more comfortable at slightly lower temperatures. Since water vapor from cooking and bathing adds moisture to your house, keep it there by not using your exhaust fans.
- Appliances account for 20 to 30 percent of all the energy used in your home. You can reduce that figure by taking a number of steps. Unplug a rarely used second refrigerator and save \$20 to \$40 a year in electric bills. Resist the urge to peek at what's baking: every time you peek, the oven temperature drops 25 to 75 degrees. When it comes time to replace your refrigerator, choose one with the freezer located at the top or bottom rather than a side-by-side unit and you'll save energy. Solid state televisions use one-third less energy than conventional tube sets.
- You'll save energy and money by turning off your central air conditioning when the house will be empty for up to four hours. And you won't lose your cool.
- As a general rule, a wood burning stove is about four times more efficient than a fireplace.
- A faucet that leaks one drop of water per second wastes 2,400 gallons of hot water each year. That's enough to run 160 full cycles on a dishwasher. Fixing that leak will save \$26.
- You can save 10 to 25 percent on your heating bill if you set the thermostat 10 degrees lower at night than it's kept during the day. You can save even more if you turn down the thermostat when the house is going to be empty for more than four hours.
- If the surface of your hot water heater feels warm, heat is being wasted. Wrapping an insulation blanket around the hot water heater can save you \$10 to \$20 a year.
- Extension cords waste electricity. If you have to use them, use as short a length as possible.

Sample Feature

"TURN OUT THE OLD LIGHT, BRING IN THE NEW"

THOMAS EDISON, FORGIVE US. YOUR INCANDESCENT LIGHT BULB HAS BEEN A BALL. IT WAS, ANYWAY, UNTIL CHEAP ENERGY RAN OUT. NOW WILL IT GO THE WAY OF THE KEROSENE LAMPS IT REPLACED? YES, IF ENERGY EFFICIENCY EXPERTS HAVE THEIR WAY.

LISTEN TO WHAT THEY'RE SAYING ABOUT YOUR BABY, TOM, AND HOW THEY DESCRIBE THE TYPICAL LIFE SPAN OF ONE OF YOUR GREATEST IDEAS: A LIGHT BULB COMES INTO THE HOME WITH ITS LIFE EXPECTANCY PRINTED ON THE BOX...PREDICTIONS OF DOOM...THIS LIGHT BULB HAS ONLY SO MANY HOURS TO LIVE. SCREW IT IN AND IT STARTS DOING ITS JOB, THROWING OFF NINETY PERCENT OF ITS ENERGY AS HEAT, SOMETHING WE SURELY DON'T NEED ON A SULTRY SUMMER NIGHT. (ON THE OTHER HAND, MAYBE WE COULD ALL CUDDLE UP SOME WINTER NIGHT AROUND THE CHANDELIER.)

THEN COMES DUST. THE HOUSE SPOUSE FORGETS TO DUST THE LIGHTBULBS AND, WHAM...THERE GOES FORTY PERCENT OF THE LIGHT, BOUNCED RIGHT BACK INTO THE BULB.

NEXT COMES THE SELF-DESTRUCTION OF THE TUNGSTEN, A SORT OF CIRRHOSIS OF THE LUMEN. THOSE TUNGSTEN MOLECULES DEPOSIT THEMSELVES ON THE SURFACE OF THE BULB, CAUSING IT TO DARKEN. ANOTHER TWENTY PERCENT OF THE LIGHT GETS TRAPPED AGAIN INSIDE.

ONLY A COUPLE OF HUNDRED HOURS OLD AND THE FINAL RUPTURE IS NEAR...THE FILAMENT FALLS APART. UNSCREW IT, SHAKE IT, LISTEN FOR THAT FINAL FAINT DEATH RATTLE TO MAKE SURE THE END IS HERE.

THAT'S HOW THEY'RE DESCRIBING YOUR BRIGHTEST IDEA, TOM!

WHAT ARE THE NEW EDISONS DOING ABOUT IT? DO THEY HAVE A BETTER IDEA, OR IS AMERICA SUPPOSED TO LIVE IN THE DARK?

THERE ARE NEW IDEAS. ONE IS THE RECURRING POPULARITY OF CLEAR-GLASS BULBS. TINTED ONES, BESIDES COSTING MORE TO START WITH, DRAMATICALLY CUT DOWN THE AMOUNT OF LIGHT GIVEN OFF BY AN INCANDESCENT BULB. ANOTHER IS TIMING DEVICES...AS LOW AS FIVE OR SIX DOLLARS...THAT TURN ON A BULB AT PRE-DETERMINED TIMES AND...MORE IMPORTANTLY... ALSO TURN IT OFF.

DIMMER CONTROLS LET YOU ADJUST THE LIGHT TO YOUR NEED OR MOOD...LOW FOR A ROMANTIC DINNER, HIGH FOR LATE-NIGHT STUDYING. NEW MODELS ON THE MARKET CAN BE ATTACHED TO TABLE LAMPS AS WELL.

AN OUTGROWTH OF YOUR ORIGINAL BULB, MR. EDISON -- LONG-LIFE BULBS -- HAVE BECOME AN ENERGY NO-NO. THEY SACRIFICE LIGHT FOR THEIR LONG LIVES AND ARE THE LEAST EFFICIENT

BULB OF ALL. RECOMMENDED ONLY FOR PLACES THAT ARE EXTREMELY HARD TO REACH. ANOTHER DEVICE CURRENTLY ON THE MARKET TO EXTEND THE LIFE OF THE INCANDESCENT BULB IS A DIODE THAT EXTENDS THE LIFE OF THE BULB FIFTY TIMES. BUT IT ALSO REDUCES THE OUTPUT OF THE BULB BY SEVENTY PERCENT, AND REDUCES ITS EFFICIENCY BY FIFTY PERCENT. EXCEPT IN SPECIAL CASES, THESE ARE NOT RECOMMENDED.

IF WE DON'T USE INCANDESCENTS, WHAT ARE THE OTHER CHOICES?

THE OLD STANDBYS, NEON...FLOURESCENT... REDESIGNED AND COLORED PRETTY SHADES... ABLE TO GIVE OFF LIGHT FIVE TIMES AS EFFICIENTLY AS AN INCANDESCENT BULB. NEW ADAPTERS...IN A COST RANGE FROM TEN TO FORTY DOLLARS...MAKE IT POSSIBLE FOR YOU TO HAVE FLOURESCENT LIGHTING WITHOUT SPECIAL FIXTURES OR REWIRING. NEW COLORS ARE AVAILABLE TO AVOID THE OFFICE ATMOSPHERE OF THE PAST.

REFLECTOR LAMPS ARE GOOD CHOICES FOR INTERIOR RESIDENTIAL LIGHTING. THEY ARE INCANDESCENT, TRUE, BUT THEY HAVE BUILT-IN FEATURES THAT FAR AND AWAY BEAT THE OLD TIME BULB. TRACK LIGHTING USES REFLECTOR PRINCIPLES, WITH LIGHT BEING DIRECTED OUT OF THE FIXTURE IN A CONE, JUST TO WHERE IT'S NEEDED. IN THESE FIXTURES, A FIFTY-WATT REFLECTOR BULB WILL PRODUCE BETTER LIGHTING AND USE LESS ENERGY THAN A HUNDRED WATT STANDARD BULB.

YOUR NEWFANGLED INVENTION HAS SERVED US WELL, MR. EDISON, BUT IT'S TIME TO PUT YOUR INCANDESCENT BULB TO REST. DON'T DESPAIR. OUR FUTURE IS FAR FROM DIM.

THERE'S A WHOLE NEW GENERATION OF EDISONS COMING UP WITH BRIGHT, ENERGY-EFFICIENT NEW IDEAS. THEY'VE SEEN THE LIGHT AND THEY'RE SHARING IT WITH THE REST OF US.

Sample Editorials

"LIFE AFTER MEGAWATTS"

ALL THIS TALK ABOUT "SACRIFICE" FOR THE SAKE OF ENERGY SAVINGS. A PRETTY PASS WE'VE COME TO WHEN WE CONSIDER IT A SACRIFICE TO OPEN OUR WINDOWS TO THE BREEZES OF A SUMMER NIGHT INSTEAD OF SHUTTING OURSELVES UP IN A ROOM WITH A NOISY COLD AIR MACHINE. OR WHEN USING AN EXTRA BLANKET IN THE WINTER, RATHER THAN CRANKING UP THE FURNACE IS CONSIDERED A NEW IDEA. ADMITTEDLY, THERE ARE DAYS IN JULY AND AUGUST WHEN SOME ARTIFICIAL COOLING IS A GOOD AND NECESSARY THING. AND SOME WINDY NIGHTS IN FEBRUARY, YOU NEED ALL THE HEAT YOU CAN GET. BUT THE "SACRIFICES" AMERICANS ARE MAKING TODAY MAY BE BLESSINGS IN DISGUISE. BEFORE CENTRAL HEATING, FIREPLACES USED TO BE THE PLACES WHERE PEOPLE IN THE HOUSE

GATHERED TO STAY WARM. COINCIDENTALLY, FAMILY MEMBERS AND GUESTS OFTEN TALKED WHILE THEY WERE TOASTING. AND NOW THAT WE RELY ON THE FURNACE TO KEEP US WARM, WE DON'T NEED TO STAY CLOSE TO THE FIREPLACE. IN SOME WAYS, THAT'S TOO BAD. YOU CAN'T EXACTLY GATHER AROUND THE FURNACE AFTER DINNER FOR SOME GOOD OLD FASHIONED TOGETHERNESS. SPEAKING OF OLD FASHIONED, WALKING AND RIDING BICYCLES TO GET AROUND BECAME SUSPECT IN THE 1940's. SUDDENLY, ONLY CHILDREN WERE ALLOWED TO WALK AND RIDE BIKES. DRIVING A CAR BECAME A RITE OF PASSAGE INTO MODERN AMERICAN ADULTHOOD, MORE IMPORTANT THAN PUBERTY. WHEN GROWN AMERICANS GAVE UP WALKING AND BICYCLING, THEY GOT SO FLABBY THEY HAD TO TAKE UP TENNIS AND JOGGING. BUT NOW THAT A NEW AGE OF WALKING LOOMS BEFORE US, WE CAN SAVE VAST SUMS ON UNBOUGHT WILSON TENNIS RACQUETS AND ADIDAS. WE MIGHT EVEN START SPEAKING TO ONE ANOTHER ON THE STREET AGAIN. ELECTRICITY MAY BE NECESSARY FOR READING, BUT CANDLELIGHT IS MORE PLEASANT, AND MORE FLATTERING, FOR ALMOST EVERYTHING ELSE. THERE ARE LOTS OF OTHER RE-DISCOVERED "SACRIFICES" THAT SOUND PRETTY GOOD TO US. LIKE FLANNEL SHEETS, COZY SWEATERS, FUR-LINED SLIPPERS AND WINTER SUNLIGHT, COOL SUMMER NIGHTS, WINDOWS THAT OPEN, CEILING FANS, BREEZEWAYS AND PORCHES. THERE'S NOTHING WRONG WITH OLD FASHIONED. AFTER ALL, WHY DO YOU THINK BYGONE TIMES ARE CALLED THE GOOD OLD DAYS?

"PUT YOUR MONEY WHERE YOUR HOUSE IS"

HAD ANY GOOD FINANCIAL ADVICE LATELY? SOME HOT TIPS YOU JUST CAN'T REFUSE? LIKE HOW TO GET 100 PERCENT, 200 PERCENT, EVEN 500 PERCENT BACK ON THE MONEY YOU INVEST? WE'VE GOT ONE FOR YOU. COME ON, YOU SAY. THAT KIND OF INVESTMENT IS TOO BIG A GAMBLE, RIGHT? RISKS YOU CAN'T AFFORD TO TAKE? NOT SO. NOT SO AT ALL. YOU CAN DO IT, AND AT NO RISK TO YOU. HOW? PUT YOUR MONEY WHERE YOUR HOUSE IS. HERE'S WHAT STUDIES SHOW: YOUR HOUSE, WHETHER IT'S RANCH-STYLE, SPLIT LEVEL, COLONIAL OR ROW HOUSE, NEEDS SOME WORK. IT'S CALLED WEATHERIZING. CAULK THE CRACKS, INSULATE, WEATHERSTRIP... MAKE SOME WINDOW IMPROVEMENTS AND SOME MINOR FURNACE REPAIRS. YOU'LL CUT THE AMOUNT OF ENERGY YOUR HOUSE NEEDS BY 50 TO 75 PERCENT. AND YOU'LL STAY AS COOL OR WARM AS YOU EVER WANT TO BE. NO SACRIFICE. NO SWEAT. HO HUM, YOU SAY. BIG DEAL. I ALREADY KNOW ALL ABOUT THAT SUBJECT. AND SO DOES EVERYBODY ELSE I KNOW.

THEY DO??? YOU DO??? WE'RE BETTING THAT
YOU DON'T!
FOR STARTERS, DID YOU KNOW YOU CAN HAVE
SIX INCHES OF INSULATION -- OR SIX FEET
OF INSULATION -- LYING ON YOUR ATTIC
FLOOR AND STILL BE LOSING A LOT OF YOUR
HOUSEHOLD HEAT THROUGH HOLES AROUND THE
CHIMNEY AND OTHER PIPES AND VENTS? DID
YOU KNOW THAT THE CRACK UNDER YOUR FRONT
DOOR PULLS OUT AS MUCH HEAT AS IF YOU SHOT
A HOLE THROUGH IN YOUR WALL?
DID YOU KNOW THAT BY LAYING OUT A FEW
DOLLARS HERE AND A FEW DOLLARS THERE
AMERICANS CAN SAVE THEMSELVES MILLIONS OF
DOLLARS...BILLIONS OF DOLLARS, WHILE
STAYING WARM AND KEEPING COOL?
JANUARY IS THE START OF OUR ENERGY '81
CAMPAIGN. WE'RE GOING TO TELL YOU HOW TO
KEEP YOUR HARD-EARNED MONEY WHERE IT
BELONGS. IN AMERICA. IN YOUR POCKET.
ENERGY '81. KEEP LISTENING. YOU WON'T
FIND A BETTER INVESTMENT.

CHAPTER TWO

MORE HOT TOPICS: BACKGROUNDERS & SAMPLE SCRIPTS

Your listeners want to know what they can do to save energy and money at home, but they're also interested in a number of other energy issues that have recently become hot topics. Do we have to be so dependent on foreign oil, or can we kick our OPEC habit? Are American cars going to join the ranks of the dinosaurs and other extinct species? Does the government really know what to do in case of a national energy emergency? What's the truth about the future of solar? What can be done about spiraling utility rates? Are things getting so bad that the elderly poor are going to have to choose between heat and food?

There are a number of other hot topics that are of immediate, personal interest to your listeners who are thinking about replacing their heating systems, or are planning to buy a new home or car. Other listeners are angry enough about the energy mess that they're ready to tackle the utilities by joining a rate reform campaign. Or excited enough about solar that they're eager to start a community solar demonstration project.

These listeners have specific questions. Isn't there anyone who can describe home energy improvements in simple English? Aren't there people in this town who really understand alternative technologies and can explain them in an interesting way? Can't somebody come up with believable advice about the best car to buy and how to get the most mileage out of it? When is someone going to tell us how to save money and energy, instead of giving us lectures, bum steers or scare stories?

The Radio Producer's Energy Sourcebook will provide you with detailed backgrounders, program and promotion ideas, and sample features, spots and editorials on a broad range of hot energy topics. The following material will give you an idea of the kinds of energy topics we're tackling for the Sourcebook, and a few of the sample features and spots we've developed to address these subjects.

BACKGROUNDER: TRANSPORTATION

About 75% of the commuters in most cities drive to work -- alone. Despite repeated campaigns by government agencies, industry and citizens groups that urge people to carpool, fewer than 15% of commuters in the average city get to work in carpools. (Unless your city has an exceptional mass transit system, only about four percent of your workers ride the bus or subway to work. And another four percent walk to their jobs.)

Many experts in behavior believe that people value the privacy and convenience of driving to work alone so much that mass transit is a doomed, bankrupt transportation policy. Others argue that people don't have to be persuaded to leave their cars; they want to; but the alternatives are grim. Buses that never show up or are so crowded that they zoom right by the bus stop. Commuter trains that break down, trapping commuters in dirty, airless cars for what seems like days at a time.

Subway stations that are filthy or too dangerous to enter alone. And entire networks of mass transit systems that don't go where people need to get to or from.

The great love affair between Americans and their cars has soured lately. The honeymoon appears to be over, and the fights have begun. But no matter how stormy the relationship, your listeners' concern about their cars is greater in many ways than ever before. Public information and education campaigns that warn people to "Drive 55; it beats not driving at all" have finally begun to convince people that their cars and their driving habits have to change if they want to continue to rely on the automobile in the future.

This concern provides you with an opportunity to give your listeners exactly what they want and need: practical, sound advice on how to get the most mileage and longest life from their cars. We'll make sure all the background information and sample features and spots you need for your listeners is contained in the Sourcebook.

The following sample feature and spots will give you an idea of the kinds of programming you can develop about transportation.

Sample Transportation Feature

"RIDING THE RAILS"

SOUND ON TAPE

wild sound of train approaching...segue to:

SOT/DiMarino

"I'm really against the automobile...
I hate what it's doing to the cities."

v/o - REPORTER

JOE DIMARINO'S CITY IS PHILADELPHIA...
HE'S LIVED THERE ALL HIS LIFE -- THIRTY-
SEVEN YEARS. AND FOR THE PAST FIFTEEN YEARS
HE'S COMMUTED TO WORK BY TRAIN.

SOT/DiMarino

"It's cheaper, and I guess in some ways
more convenient, for me to drive. But I
don't like the idea of driving cars, being
dependent on them..."

REPORTER

DIMARINO WALKS A HALF MILE FROM HIS HOME
TO THE TRAIN STATION EVERY MORNING. THERE'S
ANOTHER HALF-MILE WALK AT THE OTHER END, TO
GET TO HIS JOB AS LIBRARIAN AT THE ENQUIRER-
DAILY NEWS.

SOT/DiMarino

"It can be a hassle in winter...but I think
the walking's good for me. I get a good
feeling because I'm not using gasoline...
and I like the time to read the paper on
the train, too."

REPORTER

JOE DIMARINO AND HIS FAMILY ARE THE KIND OF
PEOPLE WHO'VE EXPERIMENTED WITH SOLAR
ENERGY...WHO TURN OFF THE LIGHTS WHEN THEY
DON'T NEED THEM...WHO TRY NOT TO USE THEIR
AIR CONDITIONERS IN SUMMER. BUT COME
JANUARY, MASS TRANSIT ADVOCATE JOE DIMARINO
MAY WELL TURN INTO AN AUTOMOBILE COMMUTER...

SOT/DiMarino

"I'm already losing money by taking the train...I've got subsidized parking at work. And if the train fare goes up another twenty-five percent in January, I just won't be able to afford it."

REPORTER

DIMARINO SAYS THAT WITH THE FARE INCREASE BEING DISCUSSED BY THE SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY, TAKING THE TRAIN TO WORK WOULD COST HIM FOUR HUNDRED DOLLARS A YEAR MORE THAN DRIVING...

SOT/DiMarino

"I'm already talking with a couple of people in my neighborhood about carpooling. They ride the train with me now. I guess carpooling is better than all of us driving separately...but you see, the train will still run, it'll just have more empty seats."

Short Subjects: 15- and 30-Second Transportation Spots

The following driving tips can stand alone as 15- or 30-second spots, or you can wrap a short promotional tease for your energy campaign around them ("...Want to know more about how you can save gas? Stay tuned to this station during our Energy '81 Campaign...").

- City driving plays havoc with your gas mileage because so much of it is stop-and-go. It takes six times as much gas to get a car moving quickly from a dead stop as when it's already moving, no matter how slowly. One way to fight back is to avoid complete stops whenever you can. If a red light's up ahead, approach it very slowly. You can often avoid having to stop completely before it changes. Jack-rabbit starts are gas guzzlers. Tests show that too heavy a foot can burn fifty percent more gas than normal acceleration.
- Your car's most energy-efficient speed is 35. In the city, stick with that as much as the law allows. On the road, 55's the best bet for safety and savings. Air resistance gets stronger with every mile per hour over 55. That's why driving fast uses more gas. It is estimated that for every mph over 55, you lose 1% in fuel economy.
- If your car is going to idle longer than 30 seconds...let's say waiting for your carpool ...turn the engine off. You'll waste fuel if you don't. A minute of idling will use less gas than what it would take to restart the car.
- Years ago it was considered a good idea to let a cold engine idle for a few minutes. A more efficient way to warm-up the engine is to start the car, let it idle for no more than 30 seconds, then drive slowly for the first few miles. A cold engine uses twice as much fuel as a warm one. Going slow those first few miles will not only save gas, but it'll save engine wear too.
- On extremely hot and windy days, almost a quart of gasoline can evaporate if your car is left outside. Put it in your garage to save gas...and your paint job. If you don't have a garage, park it under a big tree -- or in your living room!
- Faulty front-end alignment can cost one to two gallons of gas per tankful if not corrected. It'll cause the car to pull heavily to one side, or the wheels could turn in and literally plow the road. Both

waste gas because of the constant battle between forward movement and drag.

BACKGROUNDER: FOOD VS. FUEL - THE PLIGHT OF THE ELDERLY POOR

In America, the smaller your income, the bigger your energy problem. But this country's old people, who are poor almost by definition, share several other characteristics that make them the most vulnerable of all low-income energy consumers.

The Census Bureau says:

- Old people tend to live in older, less energy-efficient homes. Sixty percent live in detached houses that are harder to insulate than buildings with common walls. Their houses usually have antiquated heating systems.
- The elderly usually live alone or with one other person. But often they are still living in the family home where they raised their children -- under-used space that is relatively expensive to heat and cool, but to which they are emotionally attached.
- More old people are living longer, into their 80's, when they are less able to care for themselves and their homes, and are more susceptible to extremes of heat and cold.

In a survey of elderly home owners in Forest Park, Georgia, it was discovered that during the 1978-79 heating season, 42% of the elderly families spent less for food than they spent for fuel. The average monthly income for each of the households was \$212.00. In every case, almost half of that income went to utilities, fuel and water.

BACKGROUNDER: ENERGY ASSISTANCE PROGRAMS

The elderly poor, as a class, already are the lowest energy consumers in the country. The federal government's energy assistance programs give priority to helping the elderly poor and handicapped. But it is a priority that all too often works better on paper than in practice.

In Philadelphia, for example, weatherization paid for by the Department of Energy (including insulation, storm windows, weatherstripping and caulking) has been completed on three thousand low-income homes. But there is a backlog of another three thousand homes which qualify for federal assistance. Some of those impoverished Philadelphians have been waiting for help for two years.

State officials in Pennsylvania, who call their DOE-funded weatherization program "one of the best in the country", admit there are twenty-seven counties in the state where federal energy money is going unspent because word has not reached the poor that they are entitled to help.

BACKGROUNDER: IN CASE OF EMERGENCY...

The post-revolution cut-off of Iranian Oil and the gathering storm in the Mideast have forced the White House and Congress to ponder what would happen in a real energy emergency. Their answer is mandatory gasoline rationing, required by the Emergency Energy Conservation Act of 1979 (EECA).

The rationing plan, based on coupons distributed according to vehicle registrations, would be triggered by a 20% shortage in gasoline, heating oil or diesel fuel. Even without such a severe shortage, the President could ask Congress to order rationing, if he deemed the situation an emergency.

The law also directs the fifty states to make contingency plans in case of emergency. The Department of Energy would be responsible for approving the state plans and could also step in to force greater conservation in any state that didn't meet its target.

The steps DOE might order to encourage conservation include odd-even gasoline sales, minimum purchase levels, employer-sponsored commuting schemes, and a compressed work week.

DOE expects to spend most if not all of 1981 completing details necessary to implement a coupon rationing system. Once that preliminary work is done, if the President were to declare an emergency, still another three months or so would be needed to actually get the system in operation.

If an emergency were declared at the federal level, states would have 45 days to send their contingency plans to DOE. After DOE approves the plans, the states would have 90 days more to put the plans into effect.

Sample Energy Emergency Feature

"WHAT TO DO IF THEY SHUT OFF YOUR HEAT"

NOTHING CAN BE MORE FRIGHTENING THAN RUNNING OUT OF HEATING FUEL IN THE WINTER, ESPECIALLY IF YOU ARE A LOW-INCOME SENIOR CITIZEN. AS YOU GET OLDER, YOUR BODY LOSES HEAT MUCH FASTER THAN WHEN YOU WERE YOUNG, SO THE POSSIBILITY OF FREEZING TO DEATH BECOMES A VERY REAL DANGER.

IF YOUR HEATING FUEL RUNS OUT OR IS SHUT OFF FOR MORE THAN A FEW HOURS, GET HELP IMMEDIATELY. IF YOU'RE A RENTER, CALL YOUR LANDLORD. KEEP CALLING HIM OR HER UNTIL THE HEAT IS TURNED BACK ON. IF THAT DOESN'T WORK, CALL YOUR CITY'S EMERGENCY ENERGY ASSISTANCE PROGRAM. IF YOU DON'T KNOW THE NUMBER, CALL CITY HALL AND ASK.

IF YOUR CITY DOESN'T HAVE AN OFFICIAL PROGRAM THAT HELPS PEOPLE IN ENERGY EMERGENCIES, YOU SHOULD CALL YOUR CHURCH OR TEMPLE, THE RED CROSS OR THE SALVATION ARMY, OR THE POLICE OR FIRE DEPARTMENT.

IF YOU CAN'T GET ANY OF THESE GROUPS TO HELP, YOU MUST FIND A WARMER PLACE TO STAY UNTIL THE HEAT IS TURNED BACK ON.

DON'T BE TOO PROUD TO ASK FOR HELP FROM YOUR FRIENDS AND FAMILY.

STAYING WARM IN THE WINTER IS NOT JUST A RIGHT, IT'S A MATTER OF LIFE AND DEATH.

BACKGROUNDER: ENERGY SELF-SUFFICIENCY

A lot of towns, neighborhoods and individuals are not waiting for the federal government, the utilities or public utility commissions to solve their energy problems. They are trying instead to find answers for themselves, by themselves.

- In Philadelphia, Gus Ebbinger, Sr. collects horse manure from the city's police stables and uses it to produce methane gas. He says he hasn't paid an electric bill in years. (215-271-0812)
- Ed Suez, who studied with Rube Goldberg, has put together a windmill with bits and pieces of scrap he found around his home town, Philadelphia. Suez spent only \$40.00 (for a generator) and says the contraption plus wind power covers his light bill. (215-468-0478)
- The City Council in Portland, Oregon has passed a sheaf of energy-conscious legislation. Starting in September 1984, no Portland building may be sold or rented unless it has been weatherized; there are zoning ordinances to guarantee solar access and tax incentives for appliances that rely on renewable energy sources for their power. (Portland Energy Office, 503-248-4579)
- Richard Waybright, manager of the Mason-Dixon Farms near Gettysburg, Pennsylvania, is using cow-power to save money and escape an environmental mess. Waybright uses the manure from the farm's dairy herd to produce methane gase, which is used on the farm for energy. (Bud Nagelvoort, Sheaffer & Roland, 1735 I Street, N.W., Washington, D.C. 20006, (202) 659-0114)
- Bostonians can buy insulation and rent a blower from the Boston Building Materials Cooperative for about \$400.00...about half the price a contractor would charge to insulate a house. The Co-op also sells low-cost storm windows and doors, and holds neighborhood workshops in basic home maintenance and repairs. (John Rowse, 52 Plympton Street, Boston, Massachusetts 02118, 617-542-5842)

BACKGROUNDER: CONSUMER POWER VS. THE UTILITIES

Until the mid-1970's, utility companies were justified in selling their energy product like peanuts, from the consumers' point of view. More electricity use led to building more efficient generating plants which led to more efficiently-produced power for everybody.

The utilities are now all publicly in favor of energy conservation, and all must provide relatively inexpensive energy audits and low-interest loans for energy improvements to their customers. Some, like TVA, are underwriting solar energy projects and pushing wood-burning stoves. All these steps should mean more efficient use of energy and stabilizing peak loads. Charging heavy users higher rates is another road in the same direction.

"Peak load" means the point at which there's the greatest drain on a utility's generating capacity -- often in the dog days of summer when the utility's customers are running their air conditioners at full tilt. Utilities have been able to carry that peak load, even if it means investing in expensive equipment and plants that are not necessary most of the year. Utility customers, of course, pay for the equipment and plants, in the form of higher electric bills.

Some towns are trying to cut peak load. The people in Marblehead, Massa-

chusetts, for instance, pick up their telephones to keep their electricity bills down. Marblehead Municipal Light is a small utility that buys most of the power it needs from other companies. If MML were to go over the peak capacity for which it had contracted, it would be forced to buy a new peak capacity, at higher rates, the next year. To keep that from happening, MML employees get in touch with a network of telephone volunteers when the town's power usage starts creeping toward peak. The volunteers, local radio stations and C.B.'ers, put out the word for the people of Marblehead to cut off lights and appliances they don't need. (MML, 80 Commercial Street, Marblehead, Massachusetts 01945)

Utility Rate Reform

Growing numbers of consumers around the country are doing as much as they can to increase the energy efficiency of their homes and to cut down on the amount of heating fuel and electricity they use, in the hopes that they can reduce their energy bills. But new power plant construction has become so expensive, it guarantees rate increases.

When utility rates continue to climb even though consumers are using less energy, concerned consumers band together to push their own solutions to high utility rates. Individual citizens and consumer groups are joining the battle for utility rate reform in cities all over the country.

Lifeline Rates

So-called lifeline rates are one way consumer advocates say utility companies could both encourage more efficient use of electricity and give low-income customers a break.

A lifeline rate is generally considered a reduced flat charge for residential customers who keep their electricity consumption below a few hundred (often 500) kilowatt hours a month. Higher rates charged other residential and/or non-residential users could make up the revenue lost to the utility.

Utilities have argued that such a lifeline rate could be abused by wealthy families to subsidize a seldom-used summer home or city condominium. Consumer advocates counter that such abuse could be offset by offering the reduced rate only for a customer's primary residence.

Another utility argument against a lifeline rate is that it is an attempt to redistribute income, and that income redistribution is a matter appropriately handled in the political arena.

Seasonal vs. Time of Day Rates: A Tale of Two Families

Take two families in the same city on the same August afternoon. One is running the central air conditioning on frigid, and has a load of clothes in the washer and another in the dryer. The TV is on for background sound while someone vacuums and runs the dishwasher to clean three plates, two glasses, a dozen utensils and a casserole dish.

The second family keeps the windows open and the air conditioning off

during the day, and waits to do the wash and vacuuming until eleven PM.

Chances are the two families are charged the same basic rate for every kilo-watt hour they use. Probably what is called a seasonal rate, higher in summer than in winter because summer happens to be the season when their utility company experiences its peak load.

If their utility used time-of-day rates, family #1 would be charged a higher basic rate for power than family #2, who waited to use electricity when their appliances would put less strain on the entire system. Many utilities argue that the more sophisticated (and expensive) meters and complicated billing for a time-of-day rate structure are not justified by the potential savings.

Consumer groups argue that rate reforms like "time of day" metering would more precisely charge the cost of utility expansion to those heavy users who necessitate it.

The Final Say: The Public Utilities Commission

Once upon a time the Total Electric Home was the American Dream. The Total Electric Home is now the American Nightmare, and utility customers are waking up to the fact that it is their public utilities commission, not the utility itself, which has the final say over rising electricity rates.

The Environmental Action Foundation's Utility Project offers help to consumers who want to argue for rate reforms before their regulatory agency. The Project can recommend technical experts available to testify at hearings, can offer advice on federal utility legislation, and can put would-be consumer organizers in touch with already-established public interest energy groups.

CONTACT: Environmental Action Foundation
Utility Project
Washington, D.C.
(202) 659-1130

In the District of Columbia, the Peoples' Counsel represents consumers in electric, gas and telephone rate cases brought before the Public Service Commission. The Peoples' Counsel also provides consumer education materials, speakers on energy- and utility-related legislation and practices, and some assistance to individuals who have specific utility bill problems.

CONTACT: The Peoples' Counsel of the District of Columbia
Washington, D.C.
(202) 727-3071

In Pittsburgh, the Pennsylvania Alliance for Jobs and Energy has a staff of consumer advocates, lawyers, case workers and energy experts who work on utility-related projects. The Alliance researches rate cases scheduled for hearings before the Public Utilities Commission, provides expert witnesses to testify before the PUC in rate cases, lobbies the Pennsylvania state legislature for statewide utility rate reform, and provides consumers with advice and assistance with utility problems.

CONTACT: Pennsylvania Alliance for Jobs and Energy
Pittsburgh, PA
(412) 566-2290

CHAPTER THREE
AN ENERGY DIRECTORY: EXPERTS & PROGRAMS
IN YOUR MARKET AND BEYOND

The following energy directories for Baltimore, Philadelphia, Pittsburgh and Washington, D.C. will be amplified and expanded as work continues. In The Radio Producers' Energy Sourcebook, this chapter will be different for each market. It will consist of a selection of local public and private sector energy-related organizations, including:

- grassroot nonprofit groups
- state, county and city government programs
- utilities and Public Utilities Commissions
- university-based energy experts and programs
- energy professionals and trade associations (passive solar architectural and engineering firms, energy management and consulting services, home energy audit companies, etc.)
- the doers (backyard inventors, solar designers, etc.)
- civic groups and school energy projects

In addition to listing local experts and organizations, the Sourcebook's Energy Directory will include a description of the best federal, state and local government programs that can provide consumers and citizens groups with information, technical assistance and financial support for a range of energy-related community projects.

Finally, the Energy Directory will contain a selective guide to national nonprofit energy groups, industries and trade associations that can provide you and your listeners with information about a variety of energy issues.

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BALTIMORE: AN ENERGY DIRECTORY

Community energy groups have been springing up in cities across the nation during the past several years, and Baltimore is no exception. They range from local government agencies, universities and citizen associations that help steer local energy planning and respond to consumers' energy-related problems, to businesses that help serve changing needs for energy-saving products and services.

Baltimore has taken several steps to encourage energy awareness and self-reliance. Citizen groups are active and several new businesses are specializing in solar and other new technologies. Johns Hopkins University has resident experts in conventional techniques and in more exotic areas as well. Other nearby colleges offer short night courses for homeowners who want to solve their energy problems with their own hands.

GOVERNMENT

- Fuel Assistance Programs

Two programs are available for dealing with crises:

Emergency Services Center

Financial aid is available to people who can't pay their fuel bills. The Center has a number of different programs and grants. Qualified residents can get \$30 in public money toward a utility bill, 100 gallons of fuel oil for an empty tank, or a free ton of coal. For the second year in a row, the Marex Corporation has donated 10,000 gallons of fuel oil for the Center to distribute in emergencies.

CONTACT: Edwin Dean, Information Coordinator, (301) 234-2172
Department of Social Services
1500 Greenmount Avenue
Baltimore, MD 21212

Emergency Crisis Assistance Program

Low income residents (proof of income by tax form, letter from employer, etc., required) can apply through their nearest neighborhood assistance center (there are 44 of them) for emergency delivery of the type of fuel they use. About 33,000 residents were helped last year. The Maryland Energy Assistance program is funding \$534,000 for Baltimore emergency assistance during the winter of '80-'81. Residents can get from \$127 to \$325 once during the winter to pay utility bills.

CONTACT: Earl Jackson, (301) 396-5555
Urban Services Agency
920 East 25th St.
Baltimore, MD 21218

- Weatherization Program

A free, government-sponsored program exists to help low income (\$4,738 for a single person, \$12,363 for a family of six) residents weatherize their homes. The retrofitting includes insulating the attic and crawl space, installing storm windows, caulking, weatherstripping doors and windows and installing a smoke detector.

Founded in March of 1977, the weatherization program had completed work on 6500 homes by August, 1980. Half were done this year, using

22 staff members and 130 trained CETA employees. Based on applications to the Fuel Assistance Program, the program director estimates that an additional 15,000 homes need weatherization assistance. Funding for the program is from DOE, Maryland programs, the Urban Services Agency, and the Baltimore Community Development Agency.

In addition Technical Director Richard Aull hopes to get funding to assist former CETA workers in forming their own energy audit and weatherization businesses.

CONTACT: Richard Aull, Technical Director, (301) 396-6147
Baltimore City Weatherization Program
920 East 25th St.
Baltimore, MD 21218

- Energy Conservation Education Office

Part of the Office of Housing and Community Development, the ECEO was founded in 1977 to operate several community education programs, such as:

- Operation Hot Spot
A specially equipped plane took thermogram pictures of Baltimore homes during the winter of '79. Homeowners can tell where their homes are losing heat and receive information on how to save heat.
- "Tips for Energy Savers"
A monthly column, written and published by ECEO, provides community newspapers and other publications with low-cost, no-cost consumer information.
- Display Module
Shows energy-efficient home; for use at energy fairs, etc., and free energy literature.
- Telephone Information and Referral Service Callers get up-to-date answers on specific energy questions from the ECEO library, or are referred to another agency for assistance.
- Special Requests and Projects
Assistance is provided for individual and community energy projects, with ECEO personnel serving as consultants to provide the technical backup.
- Group Presentations
Trained energy educators will travel to schools, associations, etc., to speak on home efficiency and handle question and answer sessions.

CONTACT: Earl Jackson, (301) 396-6280
418 North Bond St.
Baltimore, MD 21231

- Mayor's Office of Information and Complaints

A source of help for utility cut-offs, infrequent oil delivery, and other problems. The office also serves as an information clearing-house, referring callers to other city and private assistance programs.

CONTACT: Herbert Fivehouse, Mayor's Energy Coordinator
Anna Bauman, Assistant
(301) 396-4879

UTILITIES

- Baltimore Gas and Electric Co.

BG&E has several programs of financial and technical assistance available to help low-income families meet their energy needs:

Winter Termination Policy:

Families having trouble meeting their fuel bills have several options within BG&E's termination policy. For families whose income falls below federal poverty guidelines, fuel payments can be deferred through the winter months to avoid termination of service. Persons receiving notice of an impending cutoff must notify BG&E and show proof of their financial situation to qualify for deferral. For those families with incomes above the poverty level, manageable payment schedules can be arranged.

Energy Audit Program

To obtain a free home energy audit, customers of BG&E can request a do-it-yourself audit form to be filled out and returned to BG&E. The company will then evaluate the form and return it with recommendations for low-cost ways to improve the energy efficiency of the home. BG&E also will send a trained energy auditor to the home to do the audit. The fee for this service is \$15.

CONTACT: Baltimore Gas & Electric Co.
Customer Relations Office
(301) 685-0123

COLLEGES & UNIVERSITIES

- Johns Hopkins University

Johns Hopkins, with its preeminent applied physics lab, is an outstanding source for technical information and unusual energy ideas that are still incubating. Among its specialists are:

Mr. Evans Francis, Solar Energy and Water, (301) 792-7800
ext. 537
Mr. Milton L. Moon, Environmental Problems (301) 792-7800,
ext. 3713
Dr. William H. Avery, Ocean Energy Programs, (301) 792-7800
ext. 535

- Anne Arundel Community College

The College holds short evening adult education courses on weatherization and solar techniques. Classes are held in a renovated barn outfitted with solar equipment.

CONTACT: Ted Susman, (301) 647-7260

- Towson State University

The University's Solar Society is made up of students, faculty members and local citizens. The Society has sponsored seminars, lectures and field trips, and members have built a solar food dehydrator for a natural food store and a "heat-grabber" solar space heating unit. The Society works with other alternative energy groups in the State and helps colleges set up their own solar groups. Several members work with the Baltimore Energy Co-op, an alternative energy supply store.

CONTACT: David Greene, (301) 321-2000

BUSINESSES

The Baltimore area is currently supporting more than a half-dozen stores supplying wood stoves and related supplies. (The Energy Store, Holden Ward Stove Co., Salamander Stove Co., The Gluvé Store, George J. Thatcher and the Grieb Manufacturing Company.) More than a dozen stores are currently marketing solar technology for the home, and at least one offers

geothermal heating and cooling units. The Sourcebook will contain detailed information on many of these businesses.

- Revere Corporation

Mark Morganstein, a solar representative for the Revere Corporation in the Baltimore area, estimates that homeowners in Maryland can get enough sun power to pay for solar investments in seven to eight years. Costs for installation in new construction, he points out, are minimal and becoming more and more widespread. In retrofitting, the first and most economical application is to heat hot water, something he is getting more and more customers to do.

CONTACT: Mark Morganstein, (301) 667-6300

- Baltimore Energy Co-op

The Baltimore Energy Co-op, founded by several Baltimore energy activists in 1979, educates the public on practical ways to use renewable energy resources.

The group distributes approximately forty energy titles--The Solar Home Book, the Passive Solar Energy Book, and other do-it-yourself guides useful for home energy projects. They sell conservation items such as showerheads and plastic weatherstripping, and distribute t-shirts and bumperstickers, the proceeds from which support the national solar energy coalition, Solar Lobby. Co-op workers also do minimal energy consultations for persons interested in utilizing an alternative energy system such as solar collector or wind generator. There is a small fee for this service.

CONTACT: David Wentling
Manager, Baltimore Energy Co-op
500½ E. 42nd St.
Baltimore, MD 21218
(301) 323-9336

CITIZEN GROUPS

- The Metropolitan Baltimore Energy Coalition

The Coalition represents a cross-section of businesses and commercial ventures, government programs and citizens groups. The organization is currently interested in working more closely with the media.

CONTACT: Alfred Himmelrich, Jr., (301) 685-2200

- Middle East Community Organization

The Middle East Community Organization helps residents of Middle East, the newest urban renewal area in Baltimore, learn how to weatherize their homes. The group organizes "energy parties" in residents' homes to teach care and maintenance of heating systems and to demonstrate low-cost weatherization techniques, such as closing holes and weatherstripping windows and doors. The program is designed specifically for renters, most of whom are low-income and qualify for winter fuel assistance.

CONTACT: Kenneth Harris
Middle East Community Organization
723 N. Broadway
Baltimore, MD 21205
(301) 675-2328

- Solar Action of Maryland

Solar Action of Maryland is a non-profit citizens group organized in late 1977 to promote the use of alternative energy sources.

To educate the public and legislators on the state and county level,

the group sponsors conferences, runs energy fairs, and publishes a quarterly newsletter, called Sun Rays. They also hope to have available by the Spring of 1981, a speakers bureau for communities wishing to sponsor talks on such things as the current energy situation, and the role of renewable resources in the state. Available now are slide shows and a workshop on tax rebates for alternative energy home systems. They hope to offer additional seminars and workshops beginning next spring. Membership is \$5.00 for individuals and \$10.00 for families.

CONTACT: Solar Action of Maryland
333 E. 25th St.
Baltimore, MD 21218
(301) 366-2070 or 323-9336

• Northeast Community Organization

This new community energy group was created to serve the northeast area of Baltimore. They plan to provide a variety of weatherization services during the winter, including neighborhood training and house-to-house weatherizing, and solar collector building during the summer. They also hope to sponsor a solar fair during Spring, 1981.

CONTACT: Judy Morgan
5662 The Alameda
Baltimore, MD 21239
(301) 433-7400

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PHILADELPHIA: AN ENERGY DIRECTORY

Community energy groups have been springing up across the nation in the past several years, and Philadelphia is no exception. They range from local government agencies, universities and citizens associations that help steer local energy planning and respond to consumers' energy-related problems to businesses that help serve changing needs for energy-saving products and services.

Unlike many cities that are just beginning to develop networks of energy organizations, Philadelphia already hosts a wealth of established groups that have launched innovative and responsive energy programs. A broad mix of government, non-profit and commercial interests have formed coalitions to encourage comprehensive community energy planning and management. Solar education and planning projects abound in the Philadelphia area.

GOVERNMENT

- Energy Assistance

Several energy assistance programs have been established to help Philadelphia residents who need emergency fuel delivery, heating system repair, or other help in meeting their winter fuel needs. The Emergency Fuel Program, the Energy Assistance Program, and the Heater Repair and Heater Replacement Program all are federally funded and administered by city and county social service agencies.

Assistance is based on family income and size, location, the type of fuel required and other factors. The current income ceiling is \$17,770 for a family of six.

In an attempt to coordinate the processing and delivery of fuel assistance, the city is setting up a 24-hour hot-line number. At present there is an extensive backlog of requests. Callers will be referred to their local intake center for immediate fuel delivery or requested to fill out an application.

CONTACT: Emergency Fuel Program: (215) 563-FUEL
 Mayor's Complaint Office: (215) 686-1776

- Weatherization Program

The Philadelphia Allied Action Commission administers the city's weatherization program. Since March of 1976, the program has weatherized approximately 3,500 homes, including insulation under the roof, weatherstripping, caulking, hot water heater insulation, storm windows and clock thermostats.

The program is free to eligible homeowners with incomes at or below 125% of the federal poverty level, and participants must agree to allow the entire program of work to be done. Qualified residents must contact one of twelve intake offices for an application.

CONTACT: Philadelphia Allied Action Commission
 (215) MU6-3979

CITIZEN GROUPS

- Philadelphia Comprehensive Community Energy Management Program

This is one of 17 energy planning projects created nationally by DOE to coordinate housing, transportation and environmental planning for an area. The group is working to define energy consumption patterns,

set energy use and supply goals, and evaluate alternative strategies for saving and creating energy in Philadelphia.

CONTACT: Court Daspit, (215) 686-8814

● Citizens Coalition for Energy Efficiency (C2E2)

C2E2 is a large umbrella group of leading Philadelphia citizens representing a variety of organizations, including the city's utilities. C2E2 is encouraging local government agencies to launch active energy efficiency programs. The group is working on demonstration programs to get homes audited and weatherized, etc. C2E2 believes Philadelphia is an ideal city for mass weatherization because its approximately 800,000 dwellings largely are built on two or three prototypes, including many rowhouses. The city's high percentage of home ownership is also seen as a plus for this type of program.

C2E2 has a 50-person board of directors, representing all layers of Philadelphia citizenry.

CONTACT: Bill Broom, (215) 854-2140

● Grassroots Alliance for a Solar Pennsylvania (GRASP)

GRASP is funded through the Center for Renewable Resources to organize Solar Action Week, October 5-13, 1981, in Philadelphia. The group is organizing weatherization programs in two target neighborhoods, hoping then to "graduate" the residents there to solar hot water. Some GRASP members have had radio experience.

CONTACT: Beth Parke, (215) 222-0318

● Mid-Atlantic Solar Energy Association (MASEA)

MASEA is a chapter of the International Solar Energy Society. The group will host a national conference on solar in Philadelphia in the spring of '81. Two years ago, MASEA hosted the Energy Department's Second National Passive Solar Conference with 150 speakers.

MASEA and its sub-chapters around Pennsylvania offer tours of solar homes and wind installations, lectures and do-it-yourself workshops.

Speakers are available on a variety of topics.

CONTACT: Linda Knapp, (215) 963-0880

● Philadelphia Solar Planning Project

This nonprofit group is studying the feasibility of solar projects for Philadelphia. The Philadelphia Solar Planning Project is funded by DOE, HUD and other public and private grants.

CONTACT: Dr. Charles Burnette, (215) 925-0844

● Consumer Caucus for Neighborhood Energy Planning

The Consumer Caucus grew out of the Institute for Local Civic Values. Its members participate in the Citizens Coalition for Energy Planning and organize weatherization programs in local neighborhoods.

CONTACT: Kristin Dawkins, (215) WA2-8960

● School of Living, York, Pennsylvania

The school conducts workshops about the impact of lifestyles on energy consumption, and studies alternatives for dealing with energy problems. Founded in 1936, the school has 3,000 members.

CONTACT: Jerry Rarihokwats, (717) 755-1561

- Community Energy Education Program of Montgomery County -- CEEP
CEEP, located in Mont Clare, just northwest of Philadelphia, offers a variety of services including residential energy audits, "hands-on" solar hot water heating workshops and free weatherization information. CEEP also has a number of renewable resource demonstrations, including windowbox collectors, solar cells, a wind generator and electric cars. The program's highlight is its "Energy Bus" that annually visits some 60 schools and as many shopping and community centers with solar and other displays.

CONTACT: Nancy Dunleavy, (215) 935-0138

COMMERCIAL

- American Society for Testing and Materials
The Society develops voluntary conservation standards for materials and products from coal and gas to nuclear and solar.
- Fuels from Farms Programs
The growth of interest in fuel from waste and other materials on farms has launched a new industry in America. Three specialists in plant operations for the process are in the Philadelphia area:

Agricultural Energy Resource Recovery
236 N. Mary St.
Lancaster, PA 17603
(717) 393-3596

William J. Jones
1818 Market St.
Philadelphia, PA 19103
(215) 299-8193

Miles J. Thomson
Enerco, Inc.
139A Old Oxford Valley Rd.
Langhorne, PA 19047
(215) 493-6565

ENERGY CONSULTING

- Catalytic, Inc.
This firm has an international market and 250 employees. It deals with energy use, supply and procurement analysis, new construction, retrofit, energy audits and tax advantages.
- CONTACT: Catalytic, Inc.
Air Products and Chemicals, Inc.
Centre Square West
1500 Market St.
Philadelphia, PA 19102
(215) 864-8787

ARCHITECTURAL AND ENGINEERING DESIGN

- Solar Earth Shelter -- Shelter Design
Shelter Design provides a guide to low-cost solar products and specializes in the construction of low-cost (\$60,000) solar homes. Built on a modular system, supported by reinforced concrete block walls and a pre-cast concrete plank roof, the house is covered with 18 inches of soil and mulch, with a glazed south-facing wall exposed to the sun. Shelter Design offers customers information on solar education, wind power, hydroelectric, biomass conversion and many facets of solar

construction.

Located at Stony Run, Pennsylvania.

CONTACT: Mic Curd/Penny Kerr, (215) 756-6112

● South Street Design

South Street Design is a group of architects working on passive solar design for the Philadelphia area.

CONTACT: Don Prowler, (215) 546-2314

● Betz, Converse, Murdoch, Inc.

This firm provides architectural, engineering and design services for energy-efficient structures.

CONTACT: Betz, Converse, Murdoch, Inc.

One Plymouth Meeting Mall
Plymouth Meeting, PA 19462
(215) 825-3800

ENERGY FORECASTERS/RESEARCHERS

- Herman Energy Services
437 Upper Gulph Rd.
Radnor, PA 19087
(215) 687-4590

CONSULTING ENGINEERS

- Controlled Energy Systems, Inc.
600 Ridlex Creek Dr.
Media, PA 19063
(215) 565-5774
- Energy Management Services, Inc.
117 S. 17th St.
Philadelphia, PA 19103
(215) 665-1100
- The Energy Misers
123 Mohawk Ave.
Norwood, PA 19074
(215) 461-7502
- John E. Engelberger, PE
32 S. Lafayette Ave.
Morrisville, PA 19067
(215) 295-0557
- Envirodesign, Inc.
237 Lancaster Ave.
Devon, PA 19333
(215) 687-0366
- Walter J. Spiegel, Inc.
321 York Rd.
Jenkintown, PA 19046
(215) 887-8514
- Lawrence G. Spielvogel, Inc.
Wyncote House
Wyncote, PA 19095
(215) 887-5600

- Vinoker-Pace Engineering Services, Inc.
135 Old York Rd.
Jenkintown, PA 19046
(215) 885-5900
- Roy F. Weston, Inc.
Weston Way
West Chester, PA 19380
(215) 692-3030

SUPPLY SOURCES

- The Energy Department Store
This new multi-purpose supply shop is dedicated to energy conservation and self-reliance. Its services include energy consulting. Owner Graham Finney, a veteran of government planning and nonprofit organizations, has strong links with neighborhood groups and has worked in the Mayor's office on comprehensive energy plans for Philadelphia. He is eager to help with promotion projects.
- CONTACT: Graham Finney, (215) 438-6109
- Solar Energy Equipment
More than a dozen stores specialize in home solar equipment in the Philadelphia area, from such passive systems as solar screens to active heating and hot water for commercial, residential and industrial installations. Names and addresses of some of these stores will be listed in the Sourcebook.

EDUCATION

- Lehigh County Community College
The college offers both non-credit adult education courses and a two-year Associate of Arts program on solar heating and design and alternative energy technologies.

The following adult education short courses are provided at a cost of only \$1.25 per course hour to students:

- two 8-week courses on solar heating
- an 8-week course on passive solar design
- a 3-week course on wood stoves
- a 3-week course on wind-electric systems
- a 3-week course on greenhouse design

Students and faculty have constructed three solar heating systems on campus, built with commercially-available equipment, that can be toured by visitors.

CONTACT: Director of Continuing Education
Lehigh Community College
Schnecksville, PA 18078
(215) 799-1147

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PITTSBURGH: AN ENERGY DIRECTORY

Community energy groups have been springing up across the nation in the past several years, and Pittsburgh is no exception. They range from local government agencies, universities and citizen associations that help steer local energy planning and respond to consumers' energy-related problems to businesses that help serve changing needs for energy-saving products and services.

Pittsburgh's city and county government energy programs are particularly impressive. Our preliminary research indicates an impressive array of programs that are helping thousands of low- and moderate-income residents stay warm in emergencies, weatherize and improve their homes, and save money on energy bills. Although the city hosts a variety of citizens groups, it appears that only a handful are dedicated solely to energy-related education and community projects.

GOVERNMENT

- Energy Crisis Assistance Program
Administered by Allegheny County Public Assistance, the program provides eligible low-income residents with direct financial assistance on utility bills. Eligibility is based on income and the number of persons in the household on public assistance. Of the 30,413 people who applied for assistance in 1979, 26,000 were eligible.

The program also provides verbal assistance and printed materials to callers and visitors concerning tax rebates, low-interest home-repair loans, weatherization programs and other efforts underway by city and county governments to help low-income residents with energy related problems.

CONTACT: Pauline Moore
Energy Crisis Assistance Program
Allegheny County Public Assistance
(412) 565-2338

- Winterizing Housing in Pittsburgh (WHIP)
WHIP is a state-funded program that has been serving low-income residents of the city for the past seven years.

Eligible homes are weatherized at no cost to home owners and renters. Approximately 900 homes are weatherized each year, although more than 1,500 people apply for the service annually.

Seven years ago, a study identified 25,000 eligible homes. And because renters are now eligible, it is estimated that 60,000 to 70,000 homes and apartments are now eligible.

The program employs eight outreach staff and 30 office and crew workers (construction crews, warehouse workers, clerks, inspectors, etc.). Weatherizing services include insulation, storm windows and doors, weather stripping, clock thermostats, door sweeps, caulking and foundation plates.

CONTACT: Donald Deaderick, Director
Winterizing Housing in Pittsburgh (WHIP)
Community Action Pittsburgh, Inc.
107 Sixth Street, 9th Floor
Pittsburgh, PA 15222
(412) 355-6343

- The Winterization Program

The Allegheny County Department of Development administers this program, which provides low-income homeowners with free attic insulation, caulking, storm windows and doors, and hot water heater insulation. There is no financial limit on the repairs or equipment installed. Winterizing work is done by private contractors rather than CETA workers.

Funding for the program comes from the state's Department of Community Affairs for winterization performed for poverty-level homeowners, and from Allegheny County for those homeowners who are above the poverty level but still meet low-income eligibility requirements. The County's funding, in turn, comes from HUD Community Development Block Grants.

Almost 1,600 homes have been winterized, and a backlog of an equal number will be completed by Spring 1981.

CONTACT: The Winterization Program
Allegheny County
Department of Development
Fort Pitt Commons
Pittsburgh, PA 15219
(412) 355-7226

- Rent Brake Program

Rent Brake is operated by ACTION-Housing, Inc. and funded by the City of Pittsburgh through a HUD Community Development Block Grant in March 1980. By November 1980, the total \$1 million grant had been spent or committed.

Rent Brake provides landlords up to \$2,000 per apartment unit to be spent for energy-related repairs. Eligibility is determined by the tenant's income level, not the landlord's. After an energy inspection by program staff, it is up to the landlord to get a contractor's estimate on repair costs, and the burden for work completion is on the landlord.

If a landlord agrees to participate in the program, he must sign an agreement freezing his tenants' rents for varying periods of time, depending on the amount of the repair grant. For example, if the grant is for \$1,000 or less, the rent must be frozen for a year; two years if the grant is more than \$1,000.

Program grants have supported energy-related repairs on 1,028 apartments so far this year, and a total of 2,000 are expected to be completed by January 1981. Although all funding has been spent or committed, the program may receive another Community Block Grant by Spring 1981. In the meantime, applicants are being referred to other city energy assistance programs.

CONTACT: Tom Waiter
Rent Brake Program
ACTION-Housing, Inc.
Two Gateway Center
Pittsburgh, PA 15222
(412) 281-2101

- Home Improvement Loan Program

This program provides loans up to \$15,000 to city residents who own their own homes. Homeowners with incomes of less than \$7,000 are eligible for loans at 3% interest, those making less than \$13,000 can get 4% interest loans, and home owners making less than \$30,000 must pay 11% interest on their loans. Loans are available only for permanent home improvements, and only after housing code violations are corrected.

Almost 3,000 loans have been made to homeowners since 1975, amounting

to \$26.5 million in total loans.

The program has been operating for two years, supported by bond sales. Its third-year funding will be provided by bond sales that began in late November 1980.

CONTACT: Stephen George, Executive Director
Home Improvement Loan Program
Urban Redevelopment Authority of Pittsburgh
(412) 255-6666

• Home Insulation Matching Grant Program

The City of Pittsburgh Housing Department funds this program, which provides matching grants of up to \$400 to homeowners who are participating in the Home Improvement Loan Program described above. Low- and moderate income city residents who own their own homes are eligible for grants which must be used to make permanent, energy-related home improvements.

The average grant is \$236. The program has provided a total of \$508,000 in grants since it was launched in 1975. These grants were attached to \$26.5 million in home improvement loans provided by the Home Improvement Loan Program. Over 1700 households have received grants. Funds are still available for 1981.

CONTACT: Mary Reilly, Supervisor
Division of Housing Assistance
City of Pittsburgh Housing Department
(412) 255-2795

Adrian Sontheimer
Home Insulation Matching Grant Program
(412) 255-6666

• Allegheny County Consumer Affairs Bureau

The Bureau serves as the consumer complaint center for Allegheny County. Twelve staff experts on home improvements, utilities, automobiles, mail orders, advertising, furniture, food and travel handle an average of 1200 calls per week. Almost 3,000 written complaints were received in 1980. The Bureau's staff provides information and assistance to callers, provides field investigations, files complaints on behalf of consumers, represents consumers in small claims court, refers callers to legal aid services, and follows up complaints to make sure problems have been taken care of.

The Bureau's Director, Bev Smith, hosts three-hour Saturday evening talk show and call-in program on KDKA radio called "the Bev Smith Consumer Report." Larry Poploski, the Bureau's Chief Investigator, indicated that the Bureau was eager to participate in any programming aired by other Pittsburgh radio and television stations.

The Bureau has a speakers bureau and wants to get more involved in media outreach efforts.

CONTACT: Larry Poploski, Chief Investigator
Bev Smith, Director
Allegheny County Consumer Affairs Bureau
Jones Law Annex Building
Fourth and Ross Streets, Third Floor
Pittsburgh, PA 15219
(412) 355-5402

• Pittsburgh Bureau of Consumer Protection

Although not actively involved in energy at present, the Bureau can provide consumers with a pamphlet it has produced regarding home weatherizing.

CONTACT: Pittsburgh Bureau of Consumer Protection
(412) 565-5135

• Pennsylvania Department of Community Affairs, Bureau of Community Energy
In addition to providing partial funding for the city and county weatherization programs for low-income residents, the Bureau of Community Energy provided construction materials and technical assistance to groups who built two solar greenhouses as additions to residences in East Liberty and McKeesport.

The Bureau provides funds to support innovative local energy conservation and self-help projects in response to proposals submitted.

CONTACT: Ann Taylor, Program Information
Ellen Knight, Regional Director
PA Department of Community Affairs
Bureau of Community Energy
430 State Office Building
300 Liberty Avenue
Pittsburgh, PA 15222
(412) 565-5002

• ACTION-Housing, Inc.

The group is a private, nonprofit civic agency established in 1957 to improve housing and neighborhoods for residents of Pittsburgh and Allegheny County.

ACTION-Housing's activities include:

- sponsoring the rehabilitation and construction of thousands of units of housing for low- and moderate-income residents, and providing funding and technical assistance to developers of Section 8 housing projects.
- administering the city's Rent Brake Program, described earlier, that provides grants for energy improvements to rental units occupied by low-income tenants
- assisting in the Operation of Allegheny County's Neighborhood Preservation Program, a low-interest home improvement loan program, and in the operation of the County's emergency home loan program.
- providing financial counseling and technical assistance to rural residents of four area counties who want to buy or improve homes with Farmers Home Administration money
- researching and producing reports on local energy- and housing-related issues and problems
- actively marketing and publicizing the programs it operates for the city, county and state
- providing a variety of community information and education programs on a range of housing subjects, including energy awareness and conservation and energy-related home improvements.

The group is seeking state funds to implement a nine-county Regional Energy Resource Center, a proposal co-sponsored by Conservation Consultants (described later). The Center would serve as a clearinghouse for printed and audio-visual materials from the Governor's Energy Council, other government agencies, industry and citizens groups, and would provide technical assistance and information referral services to consumers, schools, industry, commercial organizations and local governments. If funded, the center will also provide free home energy audits, an energy hot-line, workshops and seminars, hands-on construction

projects, energy directories, a speakers bureau and a variety of printed materials and energy kits.

Jonathan Zimmer, ACTION-Housing Executive Director, is eager to work with Pittsburgh radio and TV stations to share information and resources and participate in talk shows and call-in programs.

CONTACT: Jonathan Zimmer, Executive Director
ACTION-Housing, Inc.
Two Gateway Center
Pittsburgh, PA 15222
(412) 281-2102

CITIZEN GROUPS

- Pennsylvania Alliance for Jobs & Energy

The Alliance is a consortium of neighborhood chapters of Community Action Pittsburgh, an organization funded by the state's Department of Community Affairs. Most of the Alliance's funding is provided by the Campaign for Human Development.

The group's primary goal is utility rate reform. Its staff members research utility requests for increases in rates, lobby the staff legislature for utility rate reform, represent utility customers in testimony on rate cases brought before the Public Utility Commission, and provide "utility service advocates" who assist consumers with utility-related problems, including bill disputes.

Alliance staff members have good media contacts and are eager to participate in radio talk shows, call-in programs, PSA production, etc.

CONTACT: Darlene Minifield, Program Information
Mark Peterson, Director
Pennsylvania Alliance for Jobs & Energy
207 Market Street
Pittsburgh, PA 15222
(412) 566-2290

- Conservation Consultants

This group is a nonprofit organization supported by individual contributions, foundation grants, business organizations and government agencies.

Conservation Consultants provides schools, businesses, government agencies and the general public with workshops, education programs and curricula about energy and the environment. Its information clearinghouse, the Energy and Environment Resource Center, has served the area for three years. The group's seminars and training programs include student mini-grants for conservation projects, energy education and auditing training for teachers and administrators, and workshops for citizens groups.

A recent grant from the Pennsylvania Department of Community Affairs funded a community workshop to construct a passive solar greenhouse on the home of a low-income city resident. The Pittsburgh Architect's Workshop, described below, also participated in this project. The group has also co-sponsored the publication of an Energy Yellow Pages for Beaver County.

CONTACT: Terry Webb
Conservation Consultants
417 Thorne Street
Sewickley, PA 15143
(412) 741-3536

- Pittsburgh Architect's Workshop

The Workshop's staff of 10 consists of architects, designers, planners, CETA workers, VISTAs, and students participating in work-study programs. It provides free design and planning assistance to low-income individuals and community groups who cannot afford to hire a consultant or cannot interest government agencies in their projects. The firm is nonprofit: it accepts no fees from clients. Its projects include neighborhood parks, day care centers, improvements to commercial structures and senior citizens' centers, as well as residential greenhouses.

The Workshop is supported by Community Development Block Grants channeled from HUD through the city government, and also receives financial support from the United Way and foundations.

Workshop members have recently completed a solar greenhouse for a low-income homeowner in East Liberty, working with Conservation Consultants and other community groups and provided with construction materials and technical assistance from the state's Department of Community Affairs. The Workshop donated its time to build the greenhouse.

The group is working with the Project Area Committee in the Hill District in an attempt to secure funds from city and state government agencies that will enable them to undertake a project to retrofit low-income homeowners' residences with active and passive solar heating and hot water systems (trombe walls, greenhouses, weatherization projects, etc.).

Stan Kabala of the Workshop is eager to work with radio and TV stations on programming ideas, and would like to participate in talk shows and call-in programs. He is articulate, enthusiastic and committed to his work on behalf of low-income city residents.

CONTACT: Stan Kabala
Pittsburgh Architect's Workshop
237 Oakland Avenue
Pittsburgh, PA 15213
(412) 682-6360

- Manchester Project

Begun as a case study on solar options for urban rehabilitation by Carnegie Mellon University, the project mushroomed into a major 50-block urban construction and rehabilitation program in the Manchester area of the city. The project is backed by a city bond issue and grants from federal agencies. The 50-block project (on one block alone, \$4 million worth of construction is underway) is being managed by the Manchester Citizens Corporation.

Travis Price, a nationally recognized architect and community organizer, is providing technical assistance to the project. He reports that homes retrofitted with solar are consuming 75% less energy than was used before there were rehabilitated. Price is an articulate, extremely knowledgeable advocate of community-controlled solar energy projects. Price is eager to participate in radio and TV programming concerning energy self-sufficiency, community organizing and solar power.

CONTACT: Travis Price
Carnegie Mellon University office: (412) 578-3717
Washington, D.C. office: (202) 588-8817

Manchester Citizens Corporation
(412) 322-6448

- Western Pennsylvania Solar Energy Association, Butler, Pa.

The Association convenes monthly lectures on solar energy in Pittsburgh and Butler, and sponsor solar home tours and open houses in the area. It plans to conduct several hands-on solar demonstration workshops in Spring 1981, and is seeking funding to construct a solar greenhouse at a public school.

CONTACT: Donna Leban, President (412) 578-3716
 Luanne Kobet, Vice President (412) 282-7627

ARCHITECTURAL, ENGINEERING AND DESIGN SERVICES

- Energy Design Associates

Energy Design Associates is a small, multidisciplined architectural firm specializing in energy conservation, alternate energy technologies and environmental education. In addition to conventional architectural services, the firm has participated in seminars and workshops sponsored by colleges and universities in the northeastern part of the country, and one of its staff teaches solar design to adult education students at State College West and Community College of Allegheny County.

Staff members also participate in media programs, organize energy affairs with local and county governments and attend seminars under a Department of Energy Solar Demonstration Grant to the Northeast Solar Energy Center. (The firm acts as a sponsor of education programs in Central and Western Pennsylvania for the Northeast Solar Energy Center.)

Staff architects are involved in a number of projects that range from photovoltaic consulting with the American Institute of Architects Research Corporation and the Jet Propulsion Lab, to earth-sheltered commercial and residential structures. The firm has also served as consultants to the City of Pittsburgh.

Robert Kobet, one of the firm's partners, is eager to participate in radio and TV programming in the Pittsburgh area as a talk show guest, and will work with stations to develop features.

CONTACT: Robert Kobet
 Energy Design Associates
 114 East Diamond Street, Second Level
 Butler, PA 16001
 (412) 285-3444

- Burt, Hill, Rosar and Rittelmann Associates
400 Morgan Center
Butler, PA 16001
(412) 285-4761
- Eller Energy Management, Inc.
1388 Freeport Road
Pittsburgh, PA 15238
(412) 828-0220
- Peter F. Loftus, Corp.
900 Chamber of Commerce Building
Pittsburgh, PA 15219
(412) 391-2280

CONSULTING ENGINEERS

- Cost Reduction, Inc.
1725 Washington Road
Pittsburgh, PA 15241
(412) 341-8211
- Electronic Systems Consultants
Adelron Enterprises, Inc.
7121 Country Club Road
Butler, PA 16001
(412) 865-9490
- Energy Conversion Technology, Inc.
P.O. Box 12904
Pittsburgh, PA 15241
(412) 833-3501
- Hospital Utility Management, Inc.
121 University Place
Pittsburgh, PA 15213
(412) 681-0851/0852
- M.S.I. Energy Consultants
264 Parker Drive
Pittsburgh, PA 15216
(412) 563-4909

WASHINGTON, D.C.: AN ENERGY DIRECTORY

Community energy groups have been springing up across the nation in the past several years, and Washington, D.C. is no exception. They range from local government agencies, universities and citizen associations that help steer local energy planning and respond to consumers' energy-related problems to businesses that help serve changing needs for energy-saving products and services.

In many ways, Washington is typical, and yet it is unique. The citizen groups are in place. Local planners face much the same choices as the rest of the country. Local scholars explore new vistas in technology and applications.

But the area is also national headquarters for numerous industry trade associations, nonprofit institutions and national citizens groups that represent millions of American consumers, businesses and a variety of special interests.

GOVERNMENT

- Community Services Administration

CSA is a federal government agency that encourages low-income consumers to develop self-sufficiency skills by funding a variety of community self-help programs. Many of its funded demonstration programs involve energy conservation, solar projects and transportation issues. The agency can provide information, speakers and workshops on energy self-sufficiency.

CONTACT: Richard M. Saul, Energy Coordinator
(202) 632-6503

Mary Ann MacKenzie, Office of Program Development
(202) 254-6390

- The President's Clearinghouse on Community Energy Efficiency

Run largely by the National League of Cities and the U.S. Conference of Mayors, the Clearinghouse brings city administrators from across the country to Washington for several weeks of work answering queries on city-level energy programs. The Clearinghouse maintains a central library of literature on programs, legislation and technical ideas. Located in the basement of the Department of Energy, the Clearinghouse is used by member cities to swap community-based energy ideas.

CONTACT: Tara Kent
(202) 252-2860

- The D.C. Energy Unit

With no city funds, but money from Federal programs, the D.C. Energy Unit is running several projects for the poor, elderly and handicapped. One, the Primary Conservation Project, is proposing guidelines for new, energy-efficient construction. Another is the Energy Extension Program, which is planning four regional centers and a central office to provide weatherization and efficiency workshops for citizens. The Energy Unit ran a low-cost/no-cost project last summer with the Anacostia Energy Alliance and distributed several hundred weatherization kits to residents who completed training workshops. The unit is setting up a Solar Advisory Committee for D.C. to make long- and short-range plans to meet the city's energy needs.

CONTACT: K.T. Lukasewksi, Chief, Conservation Programs
Donovan Gay, Program Manager
(202) 727-1800

- Office of Emergency Preparedness

This office assists consumers who are trying to reach the correct city government agency in cases of emergency, such as a loss of power or heat.

CONTACT: Oscar Uquidi, Communications
(202) 727-6161

- Weatherization Program

The District's weatherization program is run by the D.C. Department of Housing and by the United Planning Organization, the local CAP agency. It has been operating on funds from DOE since April of 1979 and to date has weatherized 2,300 homes. Program staff hope to weatherize an average of 100 units per month in 1981.

Families qualify for weatherization if their income is \$4700 for a single person; \$12,000 or less for a family of six. Both single and multi-family dwellings can qualify for the program.

CONTACT: Thomas Wooden, Department of Housing
(202) 724-8640

William Durham, UPO
(202) 638-7300 ext. 603

- Department of Housing and Community Development

With funds from HUD, the Department has completely renovated two small, multi-unit, low-income apartment buildings in the District, and has installed solar space-and-water-heating systems (flat plate collectors). Heating bills are now being monitored to determine whether the systems will handle the expected 60 percent of the residents' heating demands.

CONTACT: Sal Cicero, Deputy Chief
Neighborhood Preservation Division
(202) 673-7511

- Peoples' Counsel of D.C.

Created by an Act of Congress in 1974, the Peoples' Counsel represents the public interest in electric, gas and telephone utility-related matters before the Public Service Commission. It is one of more than thirty such offices nationwide.

The Counsel has secured passage of a "Consumer's Bill of Rights," which sets standards for security deposit requirements, termination notice, and other customer service policies. It also has initiated cases to abolish the fuel adjustment clause and to examine local electric company construction plans.

Primarily a litigation office, the Counsel also offers consumer education, speaks to community groups on energy and utility-related laws and practices, and provides limited assistance to individuals with specific utility bill problems.

CONTACT: Brian Ledéerer, Counsel
(202) 727-3071

Elizabeth Noel, Deputy Counsel
(202) 727-3071

Richard Powell, Consumer Participation Coordinator
(202) 727-3873

CITIZEN GROUPS

- The Anacostia Energy Alliance

The Alliance is one of the most active local energy groups. Launched by the Institute for Local Self-Reliance, it has been a catalyst for and has provided technical assistance to neighborhood energy programs and economic development plans. AEA serves as an information center, offers free energy audits to qualified homeowners and runs a series of conservation/solar energy workshops. The group has assisted in the weatherization of 300 homes.

As a result of the Anacostia success, the D.C. Energy Office plans to expand the program into two other neighborhoods and to increase program services.

CONTACT: David Cawley
(202) 889-7932

- The National Black Veterans Organization

Formerly involved with helping weatherize public housing units, NBVO now concentrates on an ambitious program that recycles high-quality paper and aluminum.

Working with CETA personnel, the NBVO has recycled 2 million pounds of aluminum. Profits from these efforts keep four full-time workers paid from non-CETA parts of the budget.

CONTACT: Yvonne Austin
(202) 842-2900

- NUV I

This community outreach organization is developing a model for an alcohol fuels plant, using vegetable and plant wastes donated by local markets and grocery chains. With assistance from the Anacostia Energy Alliance, NUV I also plans to convert a building on its three-quarter-acre property in central Washington into a solar greenhouse, and plans to construct "sun spaces," or solar rooms, in several neighborhoods and historic districts around Washington. All three projects are scheduled for completion in mid- to late 1981. Funds come from the National Center for Appropriate Technology, the Center for Renewal Resources and other groups. NUV I views these projects as tools for neighborhood development, providing jobs, education and economic support for the area.

CONTACT: Rick Sowell
(202) 387-7990

- United Planning Organization

UPO runs an Energy Awareness Office that conducts seminars and workshops for interested groups and 32 neighborhood development centers. UPO, with funds from the Community Services Administration and the Energy and Labor Departments, has been the single biggest home weatherizing agency in the city, working with more than 1800 low- and fixed-income families in the District.

CONTACT: David Paul
(202) 638-7300

- D.C. Solar Coalition

The Coalition is an activist group that informs and educates D.C. residents on the practical uses and benefits of solar energy. It conducts workshops, holds conferences and sponsors lectures and film series.

One major project, on weatherization, was conducted at the Sorrento Building, a multi-unit apartment building for low-income people. During this hands-on workshop, the residents weatherized several apartments and built a passive solar wall heater.

In October 1980, the Coalition sponsored the first D.C. neighborhood-based energy conference, inviting community leaders to discuss local energy issues and problems.

CONTACT: Janet Brown
(202) 543-8868

● The Energy Efficiency Alliance

An offspring of the National Association of Market Developers, this group was formed to demonstrate how to go about combining solar heating technology, job training and small business development. Working with the D.C. Department of Housing and Community Development, EEA plans to retrofit 84 to 90 housing units with various low-cost solar/gas space and hot-water heating units. The units, mainly rowhouses, will then be available to low- and moderate-income families.

CONTACT: Burt Jackson
(202) 833-2222

NATIONAL NONPROFIT ENERGY GROUPS

● Solar Lobby

The Solar Lobby is a national citizens group whose members lobby for the development of solar power as a strong, decentralized and competitive industry. It published Blueprint for a Solar America, publishes the newsletter Sun Times, has a speakers bureau, and is planning a solar energy development bank for long-term, low-interest loans for solar projects.

CONTACT: Dick Munson
(202) 466-6350

● Institute for Local Self-Reliance

The Institute is a nonprofit research and consulting group that investigates the technical feasibility of community self-sufficiency. The Institute encourages home energy audit programs, neighborhood preservation activities and the development of nonprofit community energy conservation corporations. It organizes demonstration projects, conducts workshops, provides speakers and consulting services, publishes a monthly newsletter and maintains a library.

CONTACT: David Morris, Director of Urban Energy Planning
(202) 223-6154

● The Citizens' Energy Project

CEP publishes books and reports on small scale technologies, and the Citizens' Energy Directory, a listing of national groups, their work and purposes. The organization uses its proximity to Congress to testify on such issues as nuclear power and the status of solar development. Among its publications are Ninety-Nine Ways to a Simpler Life Style and Waste Watchers.

CONTACT: Ken Bossong or Scott Denman
(202) 387-8998

UNIVERSITIES

- The University of Maryland Mechanical Engineering Department
Senior engineering students design and build projects that are technologically feasible for both the United States and for developing nations. Sample projects, designed to meet specific needs, include a solar-powered bakery oven, a convection grain dryer, a laundry, a brick-making machine, an oilseed press and devices for heating with wind power.
- CONTACT: Dr. Patrick Cuniff
(301) 484-2410
- Georgetown University
Students at Georgetown University are planning the world's largest solar-powered building, a six-floor combination of classrooms, offices, auditorium and communications center.
- CONTACT: John Carlin
(202) 625-3720
- The University of the District of Columbia
UDC plans to work with the District government on field programs and demonstrations in small-scale technologies and energy efficiency.
- CONTACT: Civil Engineering Department
(202) 282-7347
- George Washington University
The University's Continuing Engineering Program offers on- and off-campus presentations and course tailored to specific groups. Short courses and workshops of from one to five days in length are open to the public at varying tuition fees. Subjects include solar, solid waste and conservation.
- CONTACT: Joseph Adinaro, Assistant Director
(202) 676-6106 or (202) 424-9773

Black

SAVING MONEY:
A CONSUMER GUIDE TO ENERGY INFORMATION
AND FINANCIAL ASSISTANCE

The energy question ranges far beyond pocketbook politics, but it is the wallop to the wallet that sends citizens looking for shelter. There are many ways to make energy efficiency pay: tax credits to tighten up the home or install new technologies; low-interest loans for home improvements that will increase efficiency, and utility rate schedules that encourage consumers to use less energy and use appliances during off-peak hours.

Finding out about these rebates, reductions and resources is not the labyrinth one might assume. From low-cost/no-cost steps that save energy, to substantial financial rewards for taking those steps, the price is right for looking into it: it's free.

LOW-COST/NO-COST HOME IMPROVEMENTS

The U. S. Department of Energy happily gives away concise, easily-understood lists and descriptions of how consumers, for pennies or a few dollars, can stretch the "mileage" of the energy they buy. Many of the suggestions take no more than minutes to do.

One of the Energy Department's best booklets, entitled Low Cost, No Cost, was mailed to selected regions of the United States, receiving an excellent response. While every household didn't get one, they are available by writing for publication CS-330, Department of Energy, Washington, D. C. 20585.

Ideas in this booklet include "getting out of hot water" by such simple means as investing 14 cents and 15 minutes to install a flow meter in the shower, for an average yearly saving of between \$15 and \$40. Or, no cents and 5 minutes to turn down the thermostat on the hot water heater. Average savings? \$20 a year for electric water heaters; \$10 a year for gas. (If the adjustments leave you cold, you can always raise them to the comfort point.) Eleven simple, illustrated tips in all, that project a savings from \$250 a year to \$380.

The Energy Department's Tips for Energy Savers is another free publication with more than 150 energy-saving tips, most of them costing nothing. Write for Tips for Energy Savers, (Publication #0-309-851), Department of Energy, Washington, D. C. 20585.

Most states provide do-it-yourself information through an Energy Extension Service or Energy Office.

In Pennsylvania, information can be obtained from:

Philadelphia Energy Office
Court Daspit, Program Manager
1401 Arch Street
Philadelphia, Pa. 19102
(215) 686-8813

Governor's Energy Council
Robert A. Shinn, Executive Director
1625 North Front Street
Harrisburg, Pa. 17101
(717) 783-8610

Weatherization Program
Caroline Boardman, Director
P. O. Box 156
Harrisburg, Pa. 17120
(717) 783-2576

Energy Extension Service
Governor's Energy Council
Ed Bigelow, Director, Grants Management
1625 North Front Street
Harrisburg, Pa. 17120
(717) 783-8610

Solar Resources
Governor's Energy Council
Linda Deliberti, Director
1625 North Front Street
Harrisburg, Pa. 17102
(717) 783-8610

TO YOUR CREDIT: TAX CREDITS, LOANS AND GRANTS FOR FUEL-EFFICIENT IMPROVEMENTS

The Internal Revenue Service allows two types of rebates for home energy efficiency. The first is a tax credit for energy conservation measures -- insulation, storm windows and thermal glazing, caulking and weatherstripping, furnace efficiency controls, etc. The second is for installing renewable energy sources, such as passive and active solar heating and hot water systems, wind-powered and geothermal systems.

The first type allows homeowners a credit of 15 percent on the first \$2,000 of the cost of materials purchased, for a maximum of \$300. The credit is subtracted directly from the amount the homeowner would otherwise owe IRS.

The second type of rebate applies to installations from January 1, 1980 through 1985, and these credits go much higher: A 40 percent credit is allowed on the first \$10,000 spent, for a \$4,000 maximum. Again, this is directly deductible from what the homeowner owes IRS.

A copy of the IRS rules and other information on who and what qualifies for residential tax credits is available from:

Office of the Chief Counsel, Legislation
and Regulations Division
Internal Revenue Service
1111 Constitution Avenue, N. W.
Washington, D. C. 20224

or from a local IRS office or the Post Office.

A cautionary note: The IRS is sticky about what it considers "insulation" or a "renewable" energy source. The things CANNOT have dual functions. Insulation must be that shiny-sided, prickly-backed stuff stapled to a wall, or batting, or other material blown in between two walls. New drapes for the picture window don't count. If solar installations serve any structural purpose they won't get by the IRS. Passive solar systems require at least three parts: a solar collector surface, a heat absorber, and a storage mass (such as masonry) that holds the heat and later transfers it to the house. Active solar systems need, in addition to collectors, storage tanks, rockbed, a thermostat to activate a circular pump or fan and a heat

exchanger. Be sure to check the IRS guidelines to see if what you plan to install will qualify for their approval.

Special Tax Credits Near Baltimore

Baltimore is flanked north and south by Harford and Anne Arundel Counties, two leaders in innovative legislation that give a break to residents willing to give solar energy a try.

Harford County's legislation, the first of its kind in the nation, offers a one-year tax credit up to \$1,000 on all structures that use solar energy for space heating or cooling. The county has allotted a total of \$150,000 in credits per year. The average credit for 1980 is \$600.

In Anne Arundel County, homeowners may subtract either the total costs of materials, installation, and construction, or the total costs of the real property tax levied against the buildings or structures, whichever is smaller. The Anne Arundel bill expires in mid-1981.

GOING IT A-LOAN: HUD PROGRAMS

The U. S. Department of Housing and Urban Development has several categories of low-cost loans and grants available to individual homeowners, community action groups and local governments. At 3% interest, they are a rare bargain in today's market.

Home Rehabilitation Loans

These are intended for low-income home owners (top income for a family of four: \$9,313). Conservation and energy-efficiency work is encouraged. The loans are administered through city and county housing offices or planning and development offices. Information is available in Philadelphia through:

Community Energy Project Assistance
Anne Harrison, Coordinator
HUD Area Office
Curtis Bldg. 625 Walnut Street
Philadelphia, Pa. 19106
(215) 597-2666

In Pittsburgh, information is available from:

Home Improvement Loan Program
Stephen George, Executive Director
Urban Redevelopment Authority of Pittsburgh
(412) 255-6666

Community Development Block Grants

Grants are awarded to communities for a variety of activities. Energy conservation is a main priority. Local governments, often with the input of citizens' groups, send their ideas and proposals to HUD for funds. The projects may not run for more than four years. Information is available through:

Marilyn H. Flook
Community Planning and Development Representative, HUD
1875 Connecticut Avenue, N. W.
Washington, D. C. 20009
(202) 673-5903

Urban Development Action Grants

This grant program funded the Fitchburg, Massachusetts Energy Audit Project, the nation's first volunteer, city-wide conservation project, which reduced energy consumption in participating homes by an estimated 25%.

Conservation is not necessarily part of the grant scope, but the Block Grants can be combined with Action Grants to provide personnel (such as CETA workers) to carry out projects. Information is available through:

Robert C. Embry, Jr., Assistant Secretary for Community Planning and Development
HUD
451 7th Street, S. W.
Washington, D. C. 20410
(202) 755-6270

HUD is the home of many other programs and departments. For information about a specific problem or program, contact:

Communications Services, Office of Public Affairs
HUD
451 7th Street, S. W., Room 9245
Washington, D. C. 20410
(202) 755-5284

THE FARMERS HOME ADMINISTRATION'S LOAN PROGRAMS

The Farmers Home Administration, FmHA, part of the U. S. Department of Agriculture, has many programs that are the rural equivalents of those administered by HUD and the Federal Home Administration. The original enabling legislation for most of them was the Energy Security Act.

Home Weatherization Loans through Rural Electric Cooperatives

Under this program, farming homeowners are eligible for a FmHA housing credit and may have home weatherization done through a local co-op. Payments can be made in installments on the monthly electric bill. For information, contact the local rural electric cooperative serving the area.

Home Improvements Loans and Grants

FmHA has two programs in this area. The "504" is a program for low-income rural families, with interest rates between 1% and 3%. The maximum for each loan is currently \$7,000. Special grants are available for the elderly. The "502" is the regular FmHA loan program, with interest rates tied to current market rates. Both kinds of loans are available for general rehabilitation activities, but FmHA encourages energy conservation loans. Information is available through the local county FmHA office, or by writing:

Farmers Home Administration
U. S. Department of Agriculture
14th and Independence Avenue, N. W.
Washington, D. C. 20250

FmHA also has money available to fund qualified alternate energy source projects. Loans, grants and loan guarantees are available through existing loan programs. Projects that will be considered include biomass conversion (to methane

and ethanol), solar power, wind energy, geothermal, coal gasification, etc. Interest rates and terms will vary. Information is available as above.

FEDERAL HOME ADMINISTRATION LOANS (TITLE I)

These loans, like the FmHA "502", are for general rehabilitation and improvements, but energy conservation is encouraged. These, too, have no fixed interest rate, but slide along generally somewhat under current market rates. Information is available through local lending institutions in the area, or the nearest FHA office.

SOLAR ENERGY AND ENERGY CONSERVATION BANK

This program, scheduled to start in Spring 1981, is headquartered in the U. S. Department of Housing and Urban Development, and jointly administered by HUD and the Departments of Agriculture, Commerce, Energy and the Treasury.

The Bank will not provide direct loans to consumers. Instead, it will provide funds to local "financial institutions" that will in turn make loans available to individuals for solar energy or energy conservation projects. "Financial Institutions" may be local banks and lending institutions, nonprofit organizations or state or local governments that meet the program's eligibility requirements. Once the Bank is in operation, individuals seeking support will deal with their local lender, which will process all documents and receive the funding from the Bank.

The maximum subsidies available for solar projects will be \$5,000 for single family homes, \$7,500 for two-family buildings, \$10,000 for three- or four-family buildings, and \$2,500 per unit for multifamily buildings. The maximum subsidy for energy conservation projects will depend on the income of the borrower.

The Bank will establish a promotion and information program to publicize the availability of subsidized loans for solar energy and energy conservation activities. In the meantime, current information will be available through:

National Solar Heating and Cooling Information Center
P. O. Box 1607
Rockville, Maryland 20850
800-523-2929
800-462-4983 (Pennsylvania residents)

The Center may also be contacted by toll-free telephone:

From Pennsylvania:	800-462-4983
From Alaska and Hawaii	800-500-4700
From the other States, Puerto Rico and the Virgin Islands:	800-523-2929

WEATHERIZATION ASSISTANCE PROGRAM FOR LOW-INCOME PERSONS

The U. S. Department of Energy manages the federal program to weatherize the homes of low-income families, a responsibility granted by the Energy Conservation and Production Act of 1976. There are 14 to 16 million eligible households. The program is administered through 10 regional offices which review grant applications and state plans, make grant awards and monitor state programs. Information is

available from:

Rollie Clifton
Department of Energy, Region III
1421 Cherry Street
Philadelphia, Pa. 19102
(215) 597-3608

State Grantees, designated by the governor, are:

Robert L. Moore, Director
D. C. Department of Housing and Community Development
1341 G Street, N. W., Suite 312
Washington, D. C. 20005
(202) 724-8721

Robert S. Moyer, Acting Secretary
Department of Community Affairs and Economic Development
630 State College Road
Dover, Del. 19901
(302) 736-4456

Kalman R. Hettleman, Secretary
Department of Human Resources
1100 N. Eutaw, Room 615
Baltimore, Md. 21201
(301) 383-5528

E. Bob Minter, Supervisor
Office of Low-Income Energy Conservation
Department of Community Affairs
363 West State Street
Trenton, N. J. 08625
(609) 292-6140

Shirley M. Dennis, Secretary
Department of Community Affairs
Room 317, Forum Bldg.
Harrisburg, Pa. 17120
(717) 787-7160

William L. Lukherd
Commissioner of Welfare
8007 Discovery Dr.
Richmond, Va. 23280
(804) 281-2936

Douglas J. Skaff, Director
Administrative Services
Governor's Office of Economic and Community Development
West Wind 144
State Capitol Bldg.
Charleston, W. Va. 25305
(304) 348-0350

UTILIZING THE UTILITIES

Consumer Services

Local utilities are now required to do more than provide energy and render a bill. All utilities are required to offer home energy audits on request, and must also provide literature to their customers on how to save energy around the home. It is there for the asking.

Energy audits, mandated by the Public Utility Rate Policy Act (PURPA), allow customers to have their homes inspected for energy leaks and other inefficiencies by a qualified utility-supplied energy auditor. The service is either free or there is a nominal charge, generally \$25.

Information on ways consumers can use less energy has replaced the utilities' previous encouragement to buy more and fancier appliances or to live in an "all-electric home." Most utilities now offer customers printed tips on weatherization and home energy efficiency, and many include a short brochure or newsletter in customers' bills that discuss energy conservation.

Preferential Rates

The nation's utilities are in a state of flux and experimentation on the subject of preferential rates, with many taking cautious looks at what is going on in other areas.

- o "Time-of-Day" Rates. These are incentives by the utilities to cut their "peak" demand, the amount of energy they must produce when everyone's air conditioners, ovens, washers and dryers, plus the normal heavy commercial load, all seem to be going at once. Only by shaving the peak demand, utilities say, can they forestall costly new plant construction. Load management plans to date have only tried to give rate incentives to customers who avoid peak periods, whether daily or seasonally.

These rate plans break down into four groups: Commercial, residential, voluntary and mandatory. The most work has been done with the "mandatory-commercial" group. One way it works is this: A commercial customer who wants to use more than a certain amount of power must schedule its use when the utility tells it to. A box is installed in the plant, and as peak demand is reached, a bell goes off indicating that the customer must cut off his power usage. If he does, he is rewarded with a rate break. If not, he gets severely punished on rates. As that system gets more sophisticated and flexible, smaller commercial customers will be able to participate voluntarily.

For residential customers, the utilities install radio-operated devices on water heaters and air conditioners. When peak demand approaches, the utility will automatically turn off the water heater and turn the air conditioner on and off at brief intervals.

Both mandatory and voluntary programs will be available, and rate breaks will be offered to those who participate. Potomac Electric Power Company, Virginia Electric Power Company and Baltimore Gas and Electric have tried voluntary rate structures that give rate rebates to customers who cut back during peak demand. They all agree that because the experiments were not highly successful, they have turned to radio controls as a way to cut peak demand.

- o "Inverted" Rates
For years, utilities generally gave lower rates to customers who used the most power. So much for the first amount of kilowatt hours, then less for the next amount, and less again for the next amount.
Inverting rates, a possibility being studied within the industry, would do the opposite, giving substantial savings to smaller users.

CONTACT: Michael Maher
Potomac Electric Power Company
(202) 872-2324

Low-Cost Loans and Other Financial Assistance

While the utilities are reluctant to view themselves as bankers, there is some activity in this area. Some utilities in the Mid-Atlantic area offer low-interest conversion loans at present, and regulations that will require all utilities to do it are pending in DOE. The intent of the legislation is to get the utilities more in the front lines in the fight for energy self-reliance.

- o Philadelphia Gas and Electric offers eight-percent loans for three specific types of home improvement: blowing insulation into an attic, installing clock thermostats and putting in flue vent dampers.
- o Pacific Gas and Electric Company has an unusual pilot loan program in Fresno, California, offering no-interest loans for approved home weatherization. To compensate, the California Public Utilities Commission allows PG&E to build the interest it must pay on the money into its rate base.
- o Utilities generally have programs for emergency energy assistance during crises, and many offer bill-averaging plans to let customers pay roughly equal monthly amounts, based on use from the previous year.