California Office
30 Ascot Place
Moraga, CA 94556
(925) 376-7172
(925) 888-2254 (Fax)

National Headquarters 2875F Northtowne Drive, Suite 155 Reno, NV 89512 (775) 997-9763 (925) 888-2254 (Fax)

Mobile Phone: (775) 997-9763 E-mail: NATHOUSPRE@AOL.COM ORIGINAL

September 6, 2007

REG- 128274-03

SEP 1 3 2007

Mr. David Selig

Cc:PA:LPD:PR (REG128274-03) LEGAL PROCESSING DIVISION

**Room 5203** 

**Internal Revenue Service** 

**PO Box 7604** 

**Ben Franklin Station** 

Washington, DC 20044

PUBLICATION & REGULATIONS BRANCH

Subject: Comments on Section 42 Utility Allowance Regulations Update FR Doc e7-11731

This letter is to submit comments on the need to update the Section 42 Utility Allowance Regulations.

<u>Proposed Section 42 Utility Allowance Regulation Changes</u>
The standards that Nationwide Housing Preservation Companies (Nationwide) would like to see in the Section 42 Utility Allowance regulations include:

- 1. The new regulations need to have the flexibility to respond to new and/or improving technologies that reduce energy costs but are still in development such as wind generated electricity, diode lighting that uses little or no electricity (but is still expensive but coming down in price) and fuel cell technology. These emerging alternative ways to reduce energy costs are a way to keep housing affordable. Improved energy technology is the primary hope for keeping Low Income Housing tax credit based housing affordable for the next 20 years or more.
- 2. The Section 42 Utility Allowances should be adjusted provided the developer can demonstrate that the changes in the Utility Allowances will result in a 15% savings in utility costs for existing buildings or a 25% savings over the standard

heating in energy costs as provided by the various industry engineering standards groups representing the heating and air-conditioning industry. This is also the same technical standard basis used in Section 179D of the Energy and Transportation Act of 2005.

- 3. The changes in the Section 42 Utility Allowances must be supported by a study prepared by a licensed engineer experienced in energy savings heating and air conditioning (HVAC) systems. These studies would be subject to review by the state agencies administering the LIHTC tax credits just as the feasibility, plans and physical condition reports which are part of the overall approval for Low Income Housing Tax Credits.
- 4. The actual energy savings should be audited annually so that the actual consumption of utilities by unit type can be established at the time the tenants recertify their income. This will allow the Utility Allowance to reflect actual consumption of utilities by the owner and the tenants and would provide incentives to reduce consumption or sharing the increased costs based on actual data.

There is significant support for doing "Green" buildings. Modification of the Section 42 Utility Allowance regulation procedures should encourage developers to give the consideration that energy conservation deserves, especially where it is being assisted by public financing in the form of tax exempt housing bonds and low income housing tax and energy credits.

The Section 42 Utility Allowances regulation changes need to be modified to allow developers to recognize the actual tenant utility costs. In Nationwide's programs, and an increasing number of existing and proposed Section 42 apartments, the owners will invest capital in energy-efficient renewable energy systems, if in fact, the new energy efficient systems reduce the cost of utilities. This is likely to occur only when Utility Allowances are reduced to actual costs, and the utility savings can be used to increase borrowings and the funding for the energy saving capital improvements. The incentives are a simple equation;

- The rent is determined/set by the median income in the area and the tenant paying 30% of their income or less than 30% because the rents are set by competition in the rental housing market. The property owner has little control of the factors that determine/set the rent.
- The adjusting of the division of the rent collected for lower tenant paid utilities between the Utility Allowance and the cash flow going to the developer becomes the only incentive to do energy efficient buildings.

# **Background Information**

The Nationwide Housing Preservation Companies and its predecessors have been involved with Low Income Housing Tax Credits (LIHTC) since 1995 in a number of states. Nationwide's primary business is acquiring and rehabilitating HUD Section 8 assisted housing using tax exempt bonds and 4% LIHTC"s. Our current projects include properties where the owner pays all utilities (so called "All Bills Paid Properties"). For example, the "All Bills Paid" utility charges work for Nationwide and its clients when ground source heat pump heating and airconditioning (GSHAVC) and/or solar systems are utilized in new construction and rehabilitation programs. In addition, the building become even more energy efficient with the replacement of single pane windows, mechanical elevator controls with electronic controls and AC elevator motors, replacing old inefficient electric hot water heaters, adding new energy efficient interior and exterior lighting, energy efficient appliances and other energy-saving systems.

The most significant energy savings in a Nationwide sponsored property is occurring in a nine-story apartment in Bloomington, Illinois using state of the art ground source heat pump based systems to provide heating, air conditioning and heating domestic water. See Exhibit 1 a picture of the building with some comments. Since January 1, 2006 the Bloomington property has used no natural gas and the consumption of electricity has been reduced by approximately 30% because of the ground source heat pump based heating and air-conditioning system and other energy-efficient systems such as new lighting.

The environmental impact is also significant. All of the heating and cooling used in the GSHVAC systems is renewable energy obtained from the earth which is always between 68-70 degrees and heats or cools the water in a closed loop (the piping is under the common areas and parking lots) which then is run through very high efficiency heat pumps located in the apartments and common areas. Exhibit 2 is an explanation of how GSHVAC works.

Future Nationwide projects will include also solar systems that should result in the properties incurring no net operating expense annually for electricity and natural gas obtained from outside sources such as public utilities using fossil fuel generated energy obtained from coal, foreign and domestic oil and natural gas.

The present Title 42 Utility Allowance regulations were not a problem at the Bloomington project because the owner pays all of the heating and air-conditioning, domestic hot water heating, lighting and other utilities in a very efficient modern building with very frugal elderly tenants.

However, owner paid utilities are not the best way to encourage tenants to conserve energy and is impractical in properties serving families. There has to be some "pain/cost" for families wasting energy.

There are numerous examples of what these energy cost problems have created in the HUD multifamily housing program, where rents were limited, and expenses and especially utility costs, continued to increase unabated. The net result was/and is:

- 1. very poor maintenance of the properties,
- 2. failure and foreclosure of HUD projects resulting in losses to HUD and the apartment owner and
- 3. Generally, miserable situation that has/is creating rundown properties that poorly serves the tenants.

In fact, many of the problems in the 60s, 70s, and 80s in the HUD multifamily programs were driven by increases in uncontrolled utilities costs. HUD finally allowed owners to establish "Utility Allowances" to stop the drain on HUD and the property owners. However, those earlier increases in utility costs were minor compared to the utility increases that are presently occurring.

The Section 42 housing that has been constructed and /or rehabilated using LIHTC's will decline and eventually destruct much more rapidly than the HUD multifamily properties when exposed to the rapidly increasing utility costs because:

- 1. The ability to absorb increased utility costs is limited by the amount of increase in incomes in the SMSA which is a far lower annual percentage than the percent increase in energy costs.
- 2. Much of the LIHTC financing is adjustable interest rate financing with rapidly rising interest rates.

This decline and failure of LIHTC based properties will occur much more quickly in than in HUD properties since:

- 1. There is no government agency to provide funds to rescue the properties.
- 2. At the end of 15 years, the LIHTC investors in a marginal property have no incentive to rescue the property.

In new proposed projects, inflated, inaccurate Utility Allowances cannot be absorbed by the developer since they reduce the cash flow available for debt service to levels that make the projects infeasible.

It is absolutely essential that capital be invested to stabilize and/or reduce the cost of energy used for heating and air-conditioning, lighting and other utility costs in properties being constructed or rehabilitated. The current Section 42 Utility Allowance loans regulations are a major impairment to increasing the capital investment in existing Section 42 projects and in proposed projects since the basis for determining Utility Allowances is not accurate.

There were three approaches to dealing with Section 42 Utility Allowances:

- 1. Owner Absorbs the Increase Cost of Utilities: The owner may absorb the increase in utility costs. In areas where the median income is increasing slowly, or not at all, as it is in most of the South and Midwest, this means that:
  - a. The cash flow from the LIHTC property will be reduced and eventually eliminated.
  - b. In the worst cases, the utility increases will be so large that there will be insufficient cash flow to pay the operating costs of the properties.

    Energy is the most dramatic increase but other costs such as taxes, insurance and maintenance also increase.
  - c. The owner will eventually not have sufficient funds to pay the debt service and expenses on the property and the property will be foreclosed thereby taking the property out of the Section 42 program.
- 2. Owner Attempts to Establish Reasonable and Accurate Utility Allowances within the Present Section 42 Utility Allowance Regulations: The developers and property owners can try to establish more realistic tenant Utility Allowances based on current methods of calculating the Utility Allowances. Our firm has experience in trying to get utility allowances adjusted but, without exception, the process is a miserable and seldom successful exercise because:
  - a. Public utilities have no interest in providing data about anything related to individual user utility costs and are especially sensitive about the politically explosive issues concerning utility costs for the elderly and low-income families. Nationwide has numerous examples where the utilities talked about providing this data, but either provided it in a haphazard manner or proposed charges for the data before even getting permission from the tenants to disclose the information. For all practical purposes, information from the utilities about energy consumption with a meaningful level of detail is not available.

b. Most large cities have politically active low income housing advocacy groups, and equally active group of marginal property owners that provide energy-inefficient housing for the Section 8 voucher program with little concern about anything but the net cash return to them. This system encourages the worst kind of property owners, and tenants who have little or no interest or ability to practice energy conservation.

For developers of new properties and most rehabilitation projects, the Housing Authority based Utility Allowances overstate the utilities costs actually paid in new or rehabilitated energy efficient buildings.

### The effect is:

- The excessive Utility Allowance reduces the amount of cash flow from the maximum rents based on the predetermined income based rents.
- The over stated Utility allowance reduces the amount of equity and loans that can be used to build or rehabilitates the properties.
  - For example: Housing Authority Established Utility
    Allowance:

Actual Cost of Utilities
\$150/month \$1,800/Year

100/month 1,200/Year

**Over Payment** 

50/month

600/Year

Loan Value of the Lost Cash Flow on a HUD 221(d)(4) loan using Tax exempt housing bonds and Low Income Housing Tax Credits (40 years at 6%) \$ 7,686/unit

 LIHTC's
 2,840/unit

 Total
 \$ 10,526/unit

Improvement funds gained in

a 100 Unit Apartment property \$ 105,260

Public housing authorities establish tenant Utility Allowances based on bedroom size with little or no concern about the condition of the properties beyond the home being safe and sanitary. There is no attempt to indentify energy efficient properties/homes (that are not typically part of the Existing Section 8 voucher program). The net result is that Utility Allowances at housing authorities and state housing finance agencies are not established for very energy efficient properties/ buildings and in no way attract the capital investment necessary to produce energy-efficient rehabilitated or new construction properties.

If the tenants are living in energy-efficient properties the Utility Allowances in most cases are overstated. The excessive utility allowances are a political and economic subsidy provided at the expense of the property owner and HUD. Finally, from the U. S Treasury standpoint, especially in the Section 8 program, the overstated Utility Allowances are a gift of public funds to the tenants that should not occur.

3. Establishing and Maintaining Accurate Utility Allowances: The third approach, which Nationwide has used since 1993, is to use the capital available from Low Income Housing Tax and Energy Credits and tax exempt bond based financing to provide capital to reduce the energy expenses in existing buildings and new construction. This approach encourages investment in energy efficient heating and air conditioning, windows, installation, appliances, water management, energy-efficient elevators, lighting and any other areas where new capital investment can reduce the amount of energy used in the property.

In a new construction LIHTC project administered by a housing finance agency, Nationwide was able to use a well-known former engineer from the local public utility to prepare a study to accurately determine what the Utility Allowances should be for energy-efficient buildings. The alternative was to accept public housing Utility Allowances that prepared for very poor housing along the Gulf Coast that was never energy-efficient and with the advent of air-conditioning and central heating was a great energy waster. Without

these reductions in the housing authority Utility Allowances, the project would not have been constructed.

In other cases, we have been able to convince state agencies that there was a need to change in the energy allowances where ground source heat pump based heating air-conditioning is installed thereby increasing the amount of energy obtained from renewable sources that are non-polluting.

In every case, the Utility Allowances adjustments were battles, because public agencies do not have the information or the background to analyze what the Utility Allowances should be regardless of their desire to improve the energy consumption in the buildings. The present Section 42 Utility Allowances also encourage doing nothing.

The Nationwide experience convinces us that the capital investment needed to install a financially viable energy reducing, renewable energy systems works. More realistic and focused Section 42 Utility Allowance regulations will increase the interest of developers and rehabilitators in including energy saving systems as a major focus of Section 42 housing. Nationwide believes that the proposed Utility Allowance standards in the IRS notice and in this letter should be a part of the Section 42 Utility Allowance regulations. The additions to the regulations should specifically address the national need to reduce the amount of energy consumed in apartments using non-renewable energy systems.

As the managing principal of Nationwide, I hope to testify at the October hearings along with other LIHTC developers, GSHVAC manufacturers, and interested parties that are doing ground source heat pump heating and air-conditioning systems. We all have a large stake in the Section 42 Utility Allowances being realistic and thereby protecting existing LIHTC developments from massive utility cost increases that have/are occurring and in protecting future LIHTC based affordable housing programs.

Finally, as a person that has worked in the HUD affordable housing programs since 1961, I can assure you that the administration of the Low Income Housing Tax Credit program by the Treasury/IRS has been a model of what should be done to efficiently provide affordable housing. There have been many examples of the Internal Revenue Service responding to the needs of the program (and not giving away taxpayer funds in the process) and adjusting to a changing world. The IRS's role in LIHTC's is not easy, but it is something that I appreciate. The program

simply works within a reasonable set of rules. I am sure many other people within the industry recognize your efforts even if they seldom provide public praise.

Sincerely

E. M. McCartt

**Managing Principal** 

Nationwide Housing Preservation Companies

## NATIONWIDE HOUSING PRESERVATION COMPANIES

California Office 36 Ascet Flace Moraga, CA 94556 (925) 376-7172 (925) 888-2754 (Fax)

<u>National Hondanarters</u>
2875F Northtowno Drive, Suite 155
Rone, NV 89512
(775) 997-9763
(925) 888-2254 (Fax)

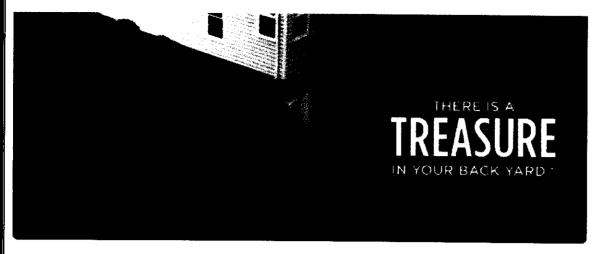
Mobile Phone: (775) 997-9763 E-meil: NATHOUSPRE@AOL.COM



# AN EXAMPLE OF HOW RENEWABLE/GREEN ENERGY PROGRAMS WORKS for EVERYONE INCLUDING PROPERTY OWNERS AND THE ENVIROMENT

The Nationwide Housing Preservation Companies (Nationwide) for the last 17 years have been doing rehabilitation of HUD apartments, which in all cases is based on making the properties more energy efficient. The most productive program for these apartments has been the use of ground source heat pump based heating and air-conditioning systems, which eliminate the need to use natural gas to heat the buildings, and reduced the cost of air-conditioning the buildings by about 30%. This is a proven technology. The experience at the Lincoln Towers Apartments a HUD Section 8 elderly complex (see picture above) in Bloomington, IL have confirmed the practicality of the GSHVAC system by eliminating the need for natural gas in an area where natural heating bills for heating and domestic water are eliminated and by reducing the cost of air-conditioning by about 30%. The property was financed using tax-exempt housing bonds and low-income housing tax credits. New projects are in a process, which will combine the GSHVAC systems with solar elements to produce super efficient renewable energy systems for the properties that will largely eliminate the need to purchase natural gas and electricity from public utilities. The new programs will take advantage of energy credits and financial support from state programs that primarily encourage the use of solar. These new combined GSHVAC/solar systems will be more efficient than either individual GSHVAC or solar systems.

Similar programs can be systems for individual homeowners, apartments, office buildings, schools and other public buildings such as libraries and the Hacienda complex in Moraga. These are proven renewable, non-poliuting energy systems that have a capacity to save a great deal of money while using renewable energy. Financing of the programs using low interest rate systems tax-exempt housing bonds and other tax-exempt financing is available. Nationwide welcomes the opportunity to discuss these programs for homes, apartments, office buildings and schools with interested parties.

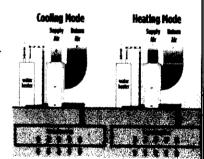


No matter what climate you live in, the temperature throughout the year varies. For some climates that means blazing summers that cool to frigid winters. What many people don't realize is that the temperature below ground (regardless of climate or season) stays fairly consistent all year.

The ground is able to maintain a higher rate of temperature consistency because it absorbs 47% of the suns energy (heat) as it hits the Earth's surface, geothermal systems are able to tap into this free energy with an earth loop. This technology is then used to provide you home or office with central heating and cooling.

#### Heating

During the heating cycle, a geothermal system uses the earth loop to extract heat from the ground. As the system pulls heat from the loop it distributes it through a conventional duct system as warm air. The same heat energy can also be used for a radiant floor system or domestic hot water heating.



#### Cooling

In the cooling mode, a geothermal system air conditions your home by reversing the heating process. Instead of extracting heat from the ground, it is extracted from your home and either moved back into the earth loop, or used to preheat the water in your hot water tank. Once the heat is removed from the air, it is distributed through the duct system in your home.

#### Four Basic Geothermal Energy Sources

Closed-loop systems circulate a water-based solution through a "loop" of small-diameter, underground pipes. Closed-loop systems can be installed horizontally, vertically or in a pond. Open-loop systems use an existing water well. Regardless of whether the system is open or closed, heat is transferred to or from the home to provide year-round comfort, no matter what the outdoor temperature is.





## Horizontal Loops

Often used when adequate land surface is available. Depending on system needs and space available, pipes are placed in trenches that range in length from 100 to 400 feet.



#### Vertical Loops

The ideal choice when available land surface is limited. Drilling equipment is used to bore smalldiameter holes from 75 to 300 feet deep.



#### Pond (Lake) Loops

Very economical to install when a large body of water is available. Coils of pipe are simply placed on the bottom of the pond or lake.



#### Open loops (Well-Water Systems)

In ideal conditions, an open-loop application can be the most economical type of geothermal system. These use groundwater from a well as a direct energy source.

## **Making Sense of Geothermal Energy**

VANCOUVER, BRITISH COLUMBIA, Jul. 19 -/E-Wire/-- Geothermal, or earth energy, is perhaps the most underutilized renewable source of energy. Whether using the earth's naturally stable temperature to provide heating and cooling, or harnessing extreme heat from deep below the earth's surface to generate electricity, the potential of geothermal energy has until now been largely untapped. But the geothermal marketplace is growing fast. Understanding the current technologies involved and the economics behind them can help building designers, business executives, and homeowners to take advantage of this renewable, clean and efficient energy source.

There are two types of energy under the geothermal category, each markedly different from the other.

A ground source heat pump, also known as a geo-exchange system, utilizes the near-constant temperature of soil just beneath the earth's surface to heat or cool a building. Geo-exchange systems consist of an external loop of piping buried in the ground below the frost line, and an internal loop of piping within the building, filled with water or a mixture of water and chemicals. The fluid absorbs heat in the winter and transfers it to the house, while in summer heat from the house will be transferred outside.

Geo-exchange is a proven technology now in use across North America. According to industry figures, geothermal heat pumps can reduce home heating and cooling costs by up to 70 percent annually.

The other type of geothermal energy involves harnessing more extreme temperatures to create steam to drive a turbine and to produce electricity. In 2003, this type of geothermal power supplied just 0.416 percent of the world's energy, reports the International Energy Agency (IEA), indicating tremendous potential for expansion.

Generally, finding high enough temperatures requires drilling several kilometers deep. Geothermal reservoirs that are at least 240 degrees Celsius are required to generate high pressure hot water to create steam, although other methods can tap less extreme temperatures by using liquids with lower boiling points.

While high-grade 'hydrothermal' resources are found all over the world, in many cases natural reservoirs are not sufficiently porous or permeable to support commercial power production. In these cases, the reservoirs can be 'stimulated', sometimes by pumping water or chemical mixtures through the structures to open up new cracks and to interconnect geothermal pools to create a viable heat source.

This method is called Enhanced Geothermal Systems (EGS), and studies indicate it could play a significant role in our energy future, as an environmentally-friendly power generation method with potentially positive economics.

Last year, an MIT study (PDF) evaluated the potential for EGS in the United States, concluding it could supply a substantial portion of the country's future electricity,

probably at competitive prices and with minimal environmental impact. With an investment of \$1 billion over the next fifteen years, geothermal could provide at least 10 percent of U.S. electricity by 2050, says the expert panel behind the report.

Though it has received less publicity than hydrogen, solar or wind energy, geothermal possesses many of the positive characteristics of other renewable energies without some of the potential drawbacks.

The great advantage of geothermal is that a lack of fuel inputs means the system costs less to run and is not subject to fluctuating fossil fuel prices. Even with high upfront costs, geo-exchange systems are generally proven cost-effective, and commercial geothermal can also take advantage of low operating costs to produce competitive power. The other great advantage is that geo-exchange and hydrothermal technologies are well developed and proven in a variety of applications.

As a proven technology with vast potential, geothermal energy is poised to take an increasing share of attention and investment dollars over the next several decades.

#### Green Technology

The Department of Energy and the EPA recognize geothermal systems as the most environmentally friendly, cost-effective and energy efficient heating and cooling technology available. So you can make a significant contribution to a cleaner environment—while saving up to 70% on your home's energy bills.

Geothermal heat pumps help electric utilities achieve significant reductions in their peak demand loads. By reducing the demand on electric utilities, the need for new power plants is reduced, along with a reduced need for natural resources like coal or gas used to generate electricity. These systems also minimize the threats of acid rain, air pollution, the greenhouse effect and global warming – problems directly linked to the burning of fossil fuels. A typical 2,500-square-foot home with a geothermal system saves the electric utility company from having to burn more than nine additional tons of coal a year compared to an electric resistance heating system. And this savings increases with larger installations.

The U.S. General Accounting
Office estimates that if geothermal
systems were installed by more people, they could
save several billion dollars annually in energy costs
and substantially reduce pollution. In fact, for every
100,000 residential units installed, more than 37.5
trillion BTUs of energy used for space conditioning
and water heating can be saved. This represents an
emissions reduction of about 2.18 million metric tons
of carbon equivalents, and cost savings to consumers
of about \$750 million over the 20-year life of the
equipment.

Geothermal heat pumps strengthen U.S. energy security. Every 100,000 homes with geothermal heat pump systems reduce foreign oil consumption by 2.15 million barrels annually and reduce electricit consumption by 799 million kilowatt hour annually.

