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Terrorists 1,000 and Enviros 5,000

Few Americans will ever forget the images of the World Trade Center towers standing with large holes at floors 96 to 103 of Tower One and floors 87 to 93 of Tower Two. As smoke poured from the holes, some of the steel columns supporting the buildings could be seen glowing orange from the heat of the fires.

While hundreds of victims had already died on the affected floors, most of the occupants, with the help of rescue personnel, were making an orderly evacuation of the buildings. Those trapped above the fire were awaiting help.

Then, to the astonishment and horror of virtually the entire American nation, both buildings fell to the ground – killing an estimated 5,000 people and destroying additional buildings nearby.

In the aftermath, numerous news reports carried a statement by one of the architects of the Trade Towers saying that he did not expect the buildings to fall. “I designed those buildings to survive the crash of a Boeing 707” was widely quoted.

Not so widely quoted – apparently spiked by most media – was the statement, often made about the Trade Towers *in the 1970s* by expert in the insulation of steel building columns Herbert Levine, that “if a fire breaks out above the 64th floor, that building will fall down.” See “Asbestos Could Have Saved WTC Lives” by Steven Milloy, *Fox News*, September 14, 2001 at www.foxnews.com.

The Trade Tower steel columns were designed to resist fire for at least 4 hours before losing the strength required to support the buildings. Emergency plans called for this four hours to be used to evacuate the buildings. It was expected that helicopters would be used to evacuate any people trapped on the roof and to put out the blaze. Yet, Tower One collapsed after one hour and forty minutes, while Tower Two collapsed after 56 minutes of fire.

Had the towers stood for four hours, an estimated 5,000 people would still be alive and the buildings would probably still be proudly standing - with large gashes in their upper floors. Why did they fall?

The buildings fell because the thermal insulation of their supporting columns did not work properly. The now familiar photos of these columns glowing orange shortly after the attack show this. Weakened by heat, the columns buckled. As the upper floors crashed into the lower floors, all of the floors cascaded downward. The lower columns were never designed to resist hundreds of thousands of tons of material dropped on them from above.

As described in Steven Milloy’s article, which also quotes Harvard University physics professor Richard Wilson, skyscrapers like the Empire State Building have their steel columns insulated with concrete – which is expensive and difficult to use. In the late 1940s, Herbert Levine invented a spray fireproofing composed of asbestos and mineral wool. This invention was instrumental in allowing the construction of large steel framed buildings.

The Trade Tower design – the one referred to as able to resist the crash of a Boeing 707 – specified the use of asbestos insulation on the supporting columns. This was used on all columns up to the 64th floors. Then, however, in 1971 when the Trade Center Towers were still under construction, New York City *banned this use of asbestos*.

Although Herbert Levine’s company failed to get the contract for asbestos coating the steel columns of the World Trade Center, he had confidence in those who did. His opinion, however, of the jury-rigged substitute insulation used after New York City banned asbestos is equally clear. “If a fire breaks out above the 64th floor, that building will fall down.” His prediction of 30 years ago was tragically correct.

The demonization of asbestos, a very useful and safe substance, has been written about many times in *Access to Energy*. (See the searchable CD-ROM of back issues of *AtE* for references.) Asbestos was an early victim of junk science and enviro fear propaganda. These enviros were joined by opportunistic lawyers and businessmen who reaped large profits from the anti-asbestos program. There was not a shred of evidence that insulating buildings with asbestos was harmful to human health. The American economy paid the price of this wasteful campaign and, on September 11, 2001, an additional 5,000 people in the World Trade Center paid with their lives.

Enviros are popular with the media and, in the current political atmosphere, anything that seems to mitigate the culpability of the terrorists is not desired news. So, you will not be reading much about the insulation of steel columns in the World Trade Center.

Those twin Towers were symbols of American strength. They were wonderful engineering achievements. Without discounting the 6,000 tragic deaths, I expect that many millions of Americans share my own personal sense of loss – of the buildings themselves. I greatly liked those buildings.

Our world is becoming increasingly surreal. What will happen next? Will terrorists take advantage of our lack of a civil defense system and kill millions of Americans with a biological attack or a rogue nuclear weapon? Governments thrive by convincing citizens that the things they fear can only be prevented by government action. Ours is now proposing to rid the world of all terrorists – a goal that will probably only partially be met. Unfortunately, we have little real protection – only insubstantial statements about national resolve.

The United States itself can be likened to the Trade Towers. They stood magnificently above the New York skyline even after they were attacked. Unknown to their admirers, however, enviro junk science and unprincipled opportunism had weakened their infrastructures. After a while, they fell.

Now, the United States has two large holes in its New York skyline. So far, America is still standing. Many decades of unprincipled opportunism – by politicians, by unethical businessmen, and by enviros and other liars – have, however, also weakened the infrastructure of the United States. Over the coming months, we shall see how serious this weakening has become.

From the deserted lumber mills and farms of the Northwest, to the intellectual wreckage of her failed tax-financed schools and moral decay of her body politic, America’s infrastructure has been badly damaged. This damage can manifest itself in all sorts of subtle ways that could lead to disaster.

Still, there is enormous good and strength in the country we have inherited. Let us hope and pray that it will be sufficient.

CIVIL DEFENSE

The phrases “homeland defense” and “civil defense” are now beginning to appear in the American media. This is a welcome change from the Clinton era during which the use of these terms in national discourse was essentially terminated.

So politically incorrect did the term “civil defense” become during the 1990s that government bureaucrats did everything possible to distance themselves from the words. The public CV of the Federal Emergency Management Agency (FEMA) official who was the last Director of Civil Defense for the United States, for example, does not even mention that he served in that capacity.

The Clinton administration dismantled and scrapped all surviving

civil defense training facilities – even including radiation monitoring courses and meters. The state agencies that FEMA sponsored to keep radiation meters available for emergencies were defunded, their employees fired or reassigned, and all of their equipment discarded.

In some cases, state governments stood between the Clinton Administration and the dumpsters to save their radiation meters. In other instances, private citizens tried to help. In Alaska, for example, one individual rescued the meters from destruction and stored them privately.

In Oregon, two men who were responsible for the radiation meters – which were distributed at police, fire, and other emergency service locations throughout the state – were instructed to collect the meters and destroy them. Instead, they managed, in the year before their jobs were terminated, to call in all of the thousands of meters in Oregon and carefully box and pack them.

Periodically during that year, these two arrived at the Oregon Institute of Science and Medicine driving a large truck loaded with meters. We unloaded and stored them. Instructions were then distributed to all of the emergency service providers in Oregon telling them where they could obtain radiation meters.

The visceral hatred that Clinton and his retainers had for anything pertaining to the defense of the United States was remarkable – and is being sorely felt today in the decreased readiness of our armed forces.

Previous Presidents have had entirely different attitudes toward civil defense. Immediately after World War II, at the urging of Edward Teller, Nobel Laureate Eugene Wigner and others, President Truman established a civil defense research program at the Oak Ridge National Laboratory. The object was to determine how American citizens could best be protected in the new nuclear age.

After an intensive effort, scientists and engineers at Oak Ridge determined very good ways of protecting civilians from nuclear weapons effects. Even in an all-out war with the Soviet Union, their shelters and equipment could have protected most Americans from the effects of blast and fallout, thereby saving tens of millions of lives

Contrary to popular myth, the United States would not have been uninhabitable after such a war. Conditions here would have been similar to those that prevailed after the American Civil War, but with the knowledge necessary to rebuild the 20th century. Residual radiation would have been a very minor problem.

In general, civil defense consists of equipment and procedures to protect the citizenry from nuclear, chemical, or biological disasters which might occur as a result of accidents, terrorism, or war. As a side benefit, a good civil defense system also protects from natural disasters such as floods, fires, and earthquakes.

Civil defense does not, of course, save everyone. Even with warning and the best equipment, some people will die. For very large disasters “some” could be thousands or even millions of people. Still, the prospect of saving most of the people should not be abandoned because one cannot save all of them.

Unfortunately, even though President Truman wanted to build a civil defense system, Congress refused to do so. Only two other Presidents tried actively to create a civil defense for the American people – Kennedy and Reagan. Both of them were also thwarted by Congress. Pork barrel vote buying was, as always, more important.

Of the three Presidents, John Kennedy came the closest to success. A very good start was made on a national fallout shelter program before Kennedy’s death derailed the effort. During that era, an excellent public education program was also begun.

I have, for example, a copy of the movie “Operation Cue,” which documents a nuclear test. In this test, many ordinary civilian buildings and other structures were built in the Nevada desert along with civil defense shelters, human dummies, and other related items. A large number of news reporters were invited to walk through these structures and were then taken to a safe shelter from which they watched a nuclear weapon exploded over the site.

The next day these reporters were again permitted to walk over the site and view the wreckage and other weapons effects. They saw first hand what the weapon had done and had not done. One important lesson was that they could walk safely on the test site soon after the explo-

sion. The air-burst nuclear explosion had created no fallout. If it had, they would have needed fallout shelters for a few days to save their lives from rapidly decaying isotopes.

While early efforts concentrated primarily on the development of nuclear defense technology, protection of shelter occupants from other threats was relatively simple after they were inside a closed shelter.

The civil defense research conducted by Oak Ridge scientists and engineers was very successful. It served as the basis for excellent civil defense programs in Switzerland and some other European countries and was useful to the Soviets and Chinese in the building of their civil defense systems. In Switzerland, for example, it has been required for decades that every new building must include a nuclear blast and fallout shelter which is also equipped with air filtration equipment for chemical and biological protection for every occupant of the building. There is more than one such shelter space per Swiss citizen.

There was only one problem with this American research program. The technology that it developed was not built in the United States. Aside from shelters for self-important upper-level politicians and bureaucrats and private shelters built by a few Americans, the United States completely ignored this need.

At Oak Ridge, the scientists still involved in the program finally concluded that the United States would never provide a civil defense system for its citizens, so they changed the emphasis of their work. They began to research the question, “what can an ordinary family do to protect itself in a civil defense emergency if no prior preparations have been made and no proper equipment is available?” This new field became known as “expedient civil defense.”

Gradually these men developed radiation meters that can be made from tin cans, shelters that can be dug by hand with shovels in a few hours, and water and air filtration and ventilation procedures that can be implemented with items usually found in an American home. They also experimented with written instructions that could be published in the newspapers in a time of crisis in order to teach these procedures to ordinary citizens.

The procedures and the instructions were repeatedly tested and revised until a primitive and yet remarkably useful body of knowledge about expedient civil defense had been assembled. This was then published by the U. S. government – in a small number of copies. This book was entitled *Nuclear War Survival Skills* by Cresson Kearny. While the book emphasized nuclear defense, many of the procedures described would be valuable in other kinds of emergencies.

Fortunately, this book was republished by other non-government organizations, so copies became widespread. In 1985, however, when we began work on civil defense, the book was out of print. Collaborating with Cresson Kearny, who then updated his book, the Oregon Institute of Science and Medicine published a new edition. For the past 15 years, we have been the sole source of this book – even for the federal government. During the Reagan Administration, FEMA purchased many thousands of these books from us for distribution to emergency managers throughout the United States.

It is a sad commentary that, throughout the nuclear age, the United States has provided no civil defense protection for its people, except for a brief effort toward fallout shelters during the Kennedy years. Other countries, especially Switzerland, the Soviet Union, and even China have instituted very significant civil defense programs. Americans have relied for their survival solely on “mutual assured destruction” – the promise by their government that, if they are annihilated by weapons of mass destruction, the government would wreak vengeance upon the citizens of whatever country had attacked.

This policy, of course, is useless against terrorists. Moreover, with the advance of technology, it has become increasingly easy for small numbers of terrorists to kill large numbers of civilians. Yet, there is no evidence that our politicians and bureaucrats are willing to divert resources from their pet projects in order to build a civil defense.

In the days since September 11, we have seen numerous press reports that our government is busy making sure our civil defenses are in a maximum state of readiness. This is easy to do, because we have no civil defenses at all. None. We are defenseless.

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NUCLEAR CIVIL DEFENSE
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When we began work on civil defense in 1985, I visited the Oak Ridge National Laboratory to learn about civil defense technology. Of greatest interest at that time was defense in a nuclear war. Conrad Chester, director of the civil defense research program, and his colleague Greg Zimmerman were custodians of the Oak Ridge emergency technology library, which contained the most complete collection of civil defense research and testing publications available anywhere in the world. Chester and Zimmerman had selected a subset of these publications which contained about 1,000 articles that they thought to be most relevant.

Under their direction and with their guidance and help, I studied all of these 1,000 articles. As the weeks passed, it gradually became clear to me that superb civil defense protection for all Americans could be provided by a national program costing only a few hundred dollars per person. All of the necessary research, engineering, and testing had been done. The lack of American civil defense is solely a political problem – not a technological one.

For remarkably low cost, every American could be provided with a blast and fallout protective shelter space, with the shelters sited at the locations where people ordinarily live and work. The most cost effective designs are cylindrical steel tanks that resist blast by “earth arching” over flexible steel rooms. Properly built and installed these provide protection from almost any air-burst weapon and from ground-burst weapons as close as one-half mile away. These shelters could save most Americans even in the worst possible nuclear attack.

While their blast resistance is remarkable, most lives would likely be saved by protection from radioactive fallout. For this, the people do not even need to be in the shelters at the time of attack. They need only to quickly occupy the shelters and remain in them for a period of a few days, while the most intense radiation from fallout is reduced by time.

A terrorist nuclear weapon would probably be ground burst and produce lots of radioactive fallout. With no warning, such shelters would not save those victims caught by the initial blast. Since, however, secondary effects – especially fallout radiation and fire – could kill far more unsheltered people than the initial blast, proper civil defense shelters could save a large majority of those endangered even by an unexpected terrorist attack. In a nuclear war, the existence of fallout shelters alone would make the difference between national survival and national annihilation.

During the last few years of the Reagan Administration and during the first Bush Administration, at the Oregon Institute of Science and Medicine, we built an effective effort in advocacy of a national shelter program. Some highlights were:

1. More than 500,000 copies of our book, *Fighting Chance*, which was an effort to mobilize the Christian community behind this political effort, were distributed.
2. We built a series of fully functional civil defense shelters that were displayed on large trailers for education and public functions. These were funded by FEMA. In fact, the only actual civil defense technology available for teaching at the FEMA national emergency training center in Maryland during those years was one of our shelter displays. That display no longer exists. It was scrapped during the Clinton Administration.
3. We lobbied extensively in the Senate and House of Representatives and made good progress in moving many Senators and Congressmen toward support for a national civil defense program.
4. We provided technical information to many families that chose to build their own shelters or to prepare in other ways. This was done primarily through 16 video tapes that we produced, our newsletter which was also called *Fighting Chance*, and other printed materials.
5. We wrote the 1988 Republican platform plank which strongly advocated a national civil defense system – a part of George Bush Senior’s platform that met with the same fate as his No New Taxes pledge.

The Reagan Administration encouraged us; the Bush Administration tolerated us; and the Clinton Administration was so negative to-

ward homeland defense that further efforts were useless.

With this failure, our fate became the same as that of the three Presidents and many advocates who have attempted to obtain a national civil defense system for the United States.

While our informational materials have helped many individuals and some of our shelter displays are still in existence, our most valuable lasting national contribution has been publication of *Nuclear War Survival Skills* and a set of 4 video tapes of the same title. The video tapes were made when we organized a two-week effort by 45 volunteers who carried out all of the instructions in *Nuclear War Survival Skills* guided solely by the book. With Cresson Kearny critiquing their efforts and providing demonstrations and dialogue, this was professionally recorded and edited for educational purposes.

Nuclear civil defense is practical and cost effective. All of the necessary research and testing has been carried out with billions of dollars supplied by American taxpayers. Many people around the world have been provided with national protection based on American designs, but the citizens of the United States remain unprotected.

Americans, whose Constitution requires their government to “provide for the common defense” have been left defenseless. Their government has produced one book, *Nuclear War Survival Skills*, which describes expedient procedures that could save many lives – but it doesn’t even publish this book.

Instead, our government has depended upon mutual assured destruction – the craziest and most immoral defense policy imaginable; upon arms control – which has succeeded in reducing world nuclear stockpiles to only a few tens of thousands of weapons; and now upon terrorist hunting – which hopes to catch each and every one of the people who may hate the United States enough to attack her citizens.

The last effective action that Conrad Chester, the final Director of the Oak Ridge Civil Defense Research Program, took on behalf of his country before his death was to personally box and ship the emergency technology library to a safe location from which it could be retrieved if its contents were ever needed. The rooms that housed this library had been defunded by the Clinton Administration and the library had been designated for the dumpsters.

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BIOLOGICAL CIVIL DEFENSE
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In the context of terrorism, biological weapons may be even more probable than nuclear weapons. Although, with tens of thousands of nuclear weapons now floating around the world, the hope that no terrorist will ever acquire a nuclear weapon is probably wishful thinking.

Biological weapons are cheap and are simple enough that a terrorist group could actually manufacture an effective weapon and its delivery system. This can be done with access only to the open scientific literature and small amounts of money and resources.

The most discussed such weapon is anthrax because the organisms are easy to obtain from natural sources and because there is a long history of anthrax weapons production. Both the United States and Britain actually produced anthrax weapons for use in World War II. Fortunately, they were never used – a circumstance that may have resulted from their presence as a deterrent on both sides of the conflict. While all sorts of exotic biological weapons have been produced, there is little need for them. Anthrax use against an unprotected human population would be unthinkable devastating.

While the 6,000 deaths on September 11, 2001 elicited headlines such as “OUR WORST NIGHTMARES . . . have become reality,” these people must have very tame dreams. Anthrax could move the decimal point in number of deaths two or even three places to the right. One automobile van carrying anthrax and an appropriate dispersal device could kill millions of people in a single attack on New York City.

Anthrax, like most biological weapons, is distributed as an aerosol so fine that it drifts in the air. The victims inhale the tiny water droplets containing anthrax spores. Death comes several days later. It can sometimes be prevented by massive use of antibiotics – if the antibiotics are started before symptoms appear and are followed by vaccination.

Once the targeted people are inside proper civil defense shelters, it

is easy to protect them from biological weapons. The air supply is simply filtered of all particles large enough to be dangerous. Without proper shelters, however, the situation is essentially hopeless. Expedient procedures can reduce exposure somewhat, but such small amounts of biological agents are required for infection that these measures are of very little value.

Stockpiling antibiotics and vaccines is worthwhile, but widespread public deployment of appropriate detection systems and proper civil defense shelters are the only practical protections.

Americans have, at present, only one form of protection against biological weapons – the hope that the devices will be incorrectly manufactured or used. While this is mostly wishful thinking if we are attacked by weapons manufactured in a well-financed governmental program, it is a reasonable possibility if terrorists actually make the weapon themselves. There are several simple but likely errors that such amateurs could make that would render their device ineffective or could at least limit its effects to only a few tens of thousands of deaths.

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CHEMICAL CIVIL DEFENSE
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Here again, the only real protection is a proper shelter with an adequately filtered air supply. There is, however, an additional factor that makes chemical weapons less of a threat. Since they do not reproduce themselves, they are not amplified within the bodies of the victims. All of the toxin, therefore, must be supplied by the weapon. This makes an effective chemical attack on large numbers of people very unlikely. The amount of material required is just too large.

Fears of chemical agents distributed in our water supplies, for example, are unjustified. The great dilution of the agents in such large amounts of water renders them ineffective. This is even true of most biological agents, which usually need to be inhaled.

Remember that “the dose makes the poison.” Even the feared anthrax bacteria is widely present in the soils of the United States. It frequently infects cattle and is a problem for veterinarians, who are vaccinated against it in high-exposure regions. These infections are not pulmonary – the fatal form. While pulmonary exposure occasionally occurs, the dose is so low that only an occasional case is seen.

The human body is well-equipped to defend itself against low exposures to all sorts of chemical substances and biological organisms that are found naturally in our environment. By clever use of aerosols, biological weapon exposures can easily be raised high enough to overcome our defenses. With chemicals, this is far more difficult. Dilution in large quantities of water lowers the dose of both kinds of agents to levels that our bodies can usually protect against.

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STARK RAVING MAD
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● Easily qualifying for this column are the American Press and Media who have amplified the effects of the September 11 tragedies many fold by spreading fear and panic. Most of the secondary effects of the attacks are attributable to that fear.

Press treatment of biological weapons has been disgraceful. First, they promoted panic and virtually invited the use of these weapons through mass publicity. Then, perhaps fearing the effects of their own campaign, the press began running stories that biological weapons would not work – a transparent and equally duplicitous message.

We hope that the foregoing editorial and articles will prove interesting and useful to readers. They are uncharacteristically lacking in specifics – although we know quite a lot about the underlying science because of our work on civil defense. These are large, difficult to condense subjects – and we think that it would be irresponsible, especially in view of the events of the past month, to discuss the details of potential terrorist actions.

Already, the press and media have, in our opinion, sharply raised the near-term chances that Americans will suffer additional terrorist events. By endless promotion of fear scenarios and by indicating to potential terrorists that their actions are even more effective than they actually are, these pundits have raised the probability of future attacks –

just as they endlessly promoted fear of school shootings (in their mindless pursuit of gun control) until virtually every unstable child in the country was dreaming of killing his classmates.

The direct effects of the Chernobyl nuclear accident killed fewer than 20 people – but also killed were tens of thousands of unborn infants aborted as a result of fear of mutations promoted by the media.

With terrorism, fear is as real an enemy as the terrorists. Fear debilitates people, it greatly amplifies the effects of the enemy’s attacks, and it inhibits potential victims from taking intelligent defensive actions. More than anything else, it is unreasoning fear – the fear that effective civil defense is impossible – that has prevented the building of an American civil defense system. Civil defense opponents have always used fear as their primary political tool.

On September 11, 2001, the tragic events in New York, Washington, and Pennsylvania raised the ordinary daily death rate in the United States for that one day by approximately 50%. If added to highway deaths for the year, the increase would be 15%. More children died on September 11 from DDT preventable malaria – deaths caused by the U. S. Environmental Protection Agency – than the number of people killed by the terrorists.

Every one of the deaths on September 11 is a personal tragedy, but these deaths did not shut down the American economy or paralyze the American people. It is fear and self-pity – among people who were not hurt and, for the most part, do not even know anyone who was hurt – that amplified the terrorist’s actions until they truly harmed our nation. The press and media have done everything in their power to promote that public fear, for their own self-serving purposes.

President Bush’s first low-key remarks after the attacks – that he was going to find the “folks” responsible and punish them – were excellent. Why wail endlessly about how much they have hurt us? Just find them and ignominiously kill them. Having delegated that job to our government, the American people should concentrate on rebuilding the World Trade Center – a few stories higher, with twice as much steel – and 12-hour-fire-rated asbestos insulation on the columns. That is the message our people and our enemies need to receive.

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GOOD READING
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● “July 10, 1941 – Jedwabne, Poland” by George Will, Newsweek, July 9, 2001 as reprinted in *Graffiti for Intellectuals*, available from P. O. Box 1542, Studio City, CA 91614.

George Will examines the behavior of human beings who perform extraordinarily evil actions, with reference to the murder of 1,600 Jews – half the town of Jedwabne – by the other half of the Polish population of the town. He concludes that they did it – *Because it was permitted, Because they could.*

Only a few men acted as killers on September 11. Many people, however, including some in the American press and media, have legitimized terrorism or promoted it through inordinate publicity. They call it “freedom fighting” – when it serves their purposes. They have created an environment in which “it is permitted” – just as the Germans created such an environment in Jedwabne.

● “DDT: Key to Third World’s War on Malaria – Radical environmentalists think we have too many people. By supporting a ban on DDT they are sentencing millions of children to death,” *Environment & Climate News*, 19 South LaSalle #903, Chicago, IL 60603.

It is just not possible to sanction and promote the mass killing of human beings in one way and then effectively prevent their killing in another way. A culture of death eventually consumes everyone.

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ACCESS TO ENERGY
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