
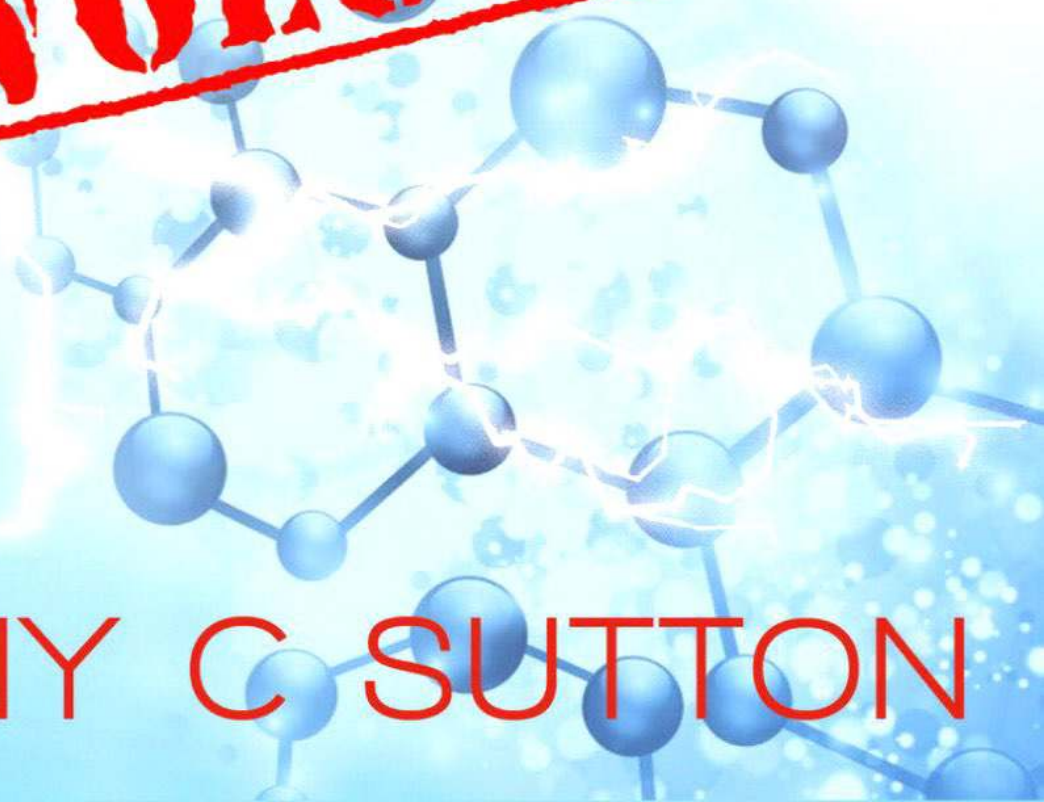


COOL FUSION



**THE SECRET
ENERGY
REVOLUTION**



ANTONY C SUTTON



Sutton studied at the universities of London, Göttingen, and California, and received his D.Sc. from the University of Southampton. He was an economics professor at California State University, Los Angeles and a research fellow at Stanford University's Hoover Institution from 1968 to 1973. In 1957, he relocated to California, becoming an American citizen in 1962.

Copyright © 2015 by Dauphin Publications. All rights reserved worldwide. No part of this publication may be replicated, redistributed, or given away in any form without the prior written consent of the author/publisher or the terms relayed to you herein.

Table of Contents

[Copyright](#)

[Preface](#)

[Chapter 1 Background to the New Energy Revolution](#)

[Chapter 2 Revival of Cold Fusion](#)

[Chapter 3 The Situation in Early 1999](#)

[Chapter 4 Initial Economic Effects](#)

[Chapter 5 Timing](#)

[Chapter 6 Opportunity](#)

[Chapter 7 Conclusions](#)

[References](#)

Preface

An extraordinary and unexpected event is almost upon us . . . the reality of free energy.

You don't know about this because of the irresponsible behavior of important elements in society. Those that claim to serve you.

The U.S. Department of Energy is either hopelessly incompetent or protecting the interest of present energy sources at the expense of society as a whole.

The press, including the so-called scientific press, has a blackout on news. The famous investigative journalists suddenly have cold feet.

The political establishment is either silent (the White House) or making half-hearted efforts to investigate (Congress). By contrast, this is by far the most important event in the history of the United States...you need to know and should know.

This report is an introduction to hidden events that will shape your life in coming decades.

Antony C. Sutton, D.Sc.

California,

December 26, 1997

Revised July 1999

Chapter 1

Background to the New Energy Revolution

Unknown to almost everyone in the United States, the world is on the verge of a revolutionary technological change in the way we acquire and use energy.

In March 1989 two electro-chemists, Martin Fleischmann of the University of Southampton in England and Martin Pons of the University of Utah (Fleischmann's one-time graduate student), announced an electro-chemical process which appeared to be a low energy nuclear reaction. The reaction supposedly released a form of nuclear energy. They called it cold fusion.

Without heat and pressure, by use of simple electrolysis, they could generate over unity . . . get more power out of the device than needed to run it. This is counter to orthodox theory that states that one needs massive pressure and high temperature to achieve so-called hot fusion, to release the power of the atom.

The physics establishment had just spent 50 year and maybe \$20 billion to achieve this end, and had not achieved over unity. Now they were told it could be done on a kitchen table with a cheap apparatus known to every freshman chemistry major.

The immediate overwhelming scientific response was "impossible." Most scientists were secure in the assump-

tion that they already knew everything about physics and proclaimed cold fusion a “fraud.” Instead of dispassionate examination of the claim, almost without exception prominent scientists shouted down the discovery. Pons and Fleischmann fled to France. Science influence with the media was used to ridicule the discovery...and science reporters lapped it up, without a second thought.

The fact that this reaction was essentially self-serving justification for a bountiful flow of federal funds went largely unnoticed. Thousands of physicists depended on federal funding in the hot fusion and high energy physics programs. Cold fusion threatened the flow of funds. The media reaction was unbelievable... instant dismissal, and unthinking ridicule:

- *NEW YORK TIMES* (April 30, 1989): “...in one word, it’s garbage.”
- NBC TV Reporter Bazell: “I know what is possible and what is not...I think it’s a bunch of junk.”
- *NATURE* Editor John Maddox: “...a milestone in the history of entertainment.”
- *NATURE* Editor David Lindley: “Pigs don’t have wings.”
- *TIME*: “I don’t think that data is worth anything.”

The negative lockstep reaction of the media can be

traced to the “prominent scientists” working on government research funds. News sources, specifically science reporters, have neither the wisdom nor the fortitude to question these self-appointed experts. These are some of the comments made by physicists before they had time to repeat the experiments (i.e., knee-jerk emotional reactions):

- Steven Koonin, Cal Tech: “...a mistake... they found something that didn’t exist.”
- Robert Park, American Physical Society: “...a séance of true believers.”
- Herman Fesbach, MIT: “I don’t want to see any more evidence. I think it’s a bunch of junk.”

The Department of Energy appointed a Cold Fusion Panel from its Energy Research Advisory Board with Professor John Huizenga of University of Rochester as cochairman. In November 1989 the panel issued a report which was anything but impartial. The panel could find no convincing evidence of excess heat and claimed that the process is “contrary to all understanding gained of nuclear reactions in the last half of the 20th century.” The panel recommended against any specific follow-up and recommended channeling any work “within the present funding system” (a good way to kill off further work).

The immediacy and intensity of hostility suggests cold fusion hit a sensitive nerve. The world view of physics had

been shaken. If cold fusion was right the theoretical structure of physics was in error—big-time error.

Since 1989 high-energy physicists have fallen over themselves to declare cold fusion “impossible,” a “delusion,” a “fraud,” “bad science,” and everything disreputable under the sun. They particularly point to the 1989 DOE report and the initial large number of unsuccessful duplications. Notably they always cite the work of 1989 to 1991 when there were difficulties in duplication. In particular the platinum-palladium electrodes were trouble some—some grades worked well, others did not. There were problems with surface defects.

This negative approach was largely confined to the U.S. and Britain. In Japan in 1991 about 2 percent of the hot fusion budget was devoted to cold fusion. In the U.S. — none. In India, a broadly based cold fusion program was continued under the Indian Atomic board. In Russia, in spite of troubled times, about 15 million rubles were allocated to twenty laboratories in the four years between 1991 and 1995 for cold fusion research.

The error made by high energy physics was to attempt suppression. This drove research into the private sector where they lost opportunity to control. If they had financed the work through government funding they could have attempted classification and suppression through the government DOE apparatus and so bury for all time . . . at least inside the U.S. Their haste to protect 100 percent of hot fu-

sion funding forced development into the private sector.

Chapter 2

Revival of Cold Fusion

The assault was nearly successful. Cold fusion was almost killed off. Pons and Fleischmann were driven from the U.S. to France to a Japanese funded laboratory. Physicist after physicist claimed fraud and the media followed suit, down to the present day. Lack of funding and peer pressure combined to keep many scientists in ignorance, and even today success is not widely known. Around the world independent researchers took a second look. If they had no fund they cannibalized other projects. A handful of researchers looked beyond the official screen and a few low-circulation journals, including FTIR (see last page), emerged and tracked the new work.

Even within the U.S. government, questions remained and small-scale work continued at the U.S. Navy in China Lake, California, NASA, Cleveland, Los Alamos National Laboratory, and elsewhere.

Very slowly, the new work paid off but remained unpublicized. The official DOE position remained the same. DOE officially refused to finance any workers who were even interested in cold fusion. The Patent Office will not grant patents on cold fusion but recently has granted patents where "over unity effect" is in the description.

The first studies were unsuccessful but gradually came

enough positive results to keep the work alive. It was found that the surface characteristics of electrodes were significant—electrodes had to be pure with no surface defects.

Then, gradually, the truth emerged. Major laboratories duplicated the Pons-Fleischmann method; others looked at solid state devices and different electrode materials. Over unity was confirmed. Also, “life after death” (the cells continued working after the power was switched off) and the output-input ratios became extraordinary...one Japanese group reported the level to be 70,000:1.

Cold fusion developed variants, was repeatable, and was capable of generating excess heat which could be converted to low-voltage electricity. The fuel was water. Sometimes a compound like potassium carbonate was added to the electrolyte to improve conductivity. That's it. Simplicity itself.

After 1994 came key confirmations one after the other. The most significant of these announcements was by a U.S. Navy official in 1995...significant because the U.S. Navy has an excellent reputation for vanguard research.

David Nagel, Superintendent of the Condensed Matter and Radiation Science Laboratory at the U.S. Naval Research Laboratory in Washington, D.C., presented a lecture at the long established Philosophical Society in Washington, D.C.

Said Nagel on October 20th 1995:

“Cold fusion is now ignored, disdained and even mocked by scientists and the public. This is due to a variety of mistakes by scientists and the Government and the unwillingness of journal, magazine and newspaper editors to pay attention to this topic.”

The government made mistakes. But they made mistakes because they trusted their advisers. We don't blame government, we blame the self-serving, closed-minded advisers. Hopefully, the government will learn a lesson and choose its advisers more carefully. The Office of Naval Research has for years been in the vanguard of research. Dr. Edmund Storms at Los Alamos National Laboratory has extensively investigated cold fusion. Yet the government relies on advisers who have never conducted a single experiment nor admittedly witnessed or reviewed any experiment.

Other significant positive confirmations include:

- SHELL OIL: Dufour of Shell Research in France presented a paper (#604) at the fifth ICCF. Detected up to seven watts of excess heat.
- AMOCO PRODUCTION CO.: Issued Report T-90-E-02 (90081 ART 0082, 19 March 1990). Several experiments “yielded 30 percent energy gain over the life of the experiment (two months).” Was repeated. Second group of experiments also yielded 30 percent energy gain.
- BECHTEL CORP.: B. Klein of Bechtel Corp. has ex-

explored the economics of cold fusion and concludes that generator units operating at 10-20kw will encourage power users to gradually unplug from the power networks. (Development at this time is entirely on units greater than 10kw).

- (CEREM) FRENCH ATOMIC ENERGY COMMISSION: Lonchampt et al 150 percent excess heat using the Pons-Fleischmann method.

- LOS ALAMOS NATIONAL LABORATORY: Dr. Edmund Storms has worked extensively on cold fusion especially electrode surfaces. Numerous over unity results.

- EPRI (Electronic Power Research Institute): Report No. TR -104195. Excess power ranging from a few percent to 350 percent observed (6 August 1996).

- NASA (Lewis Research Center, Cleveland): Technical Memorandum #107167. Excess heat 6 to 68 percent.

- U.S. NAVY (China Lake Air Warfare Center): Evidence for excess heat, particularly clear when Johnson Mathey palladium used for cathodes (seven of eight cells produced 30 percent excess power).

These results turned the tide. Government and those who stayed with cold fusion realized that cold fusion was real. That didn't stop the skeptics, notably Dr. Huizenga, who still today travels around the country preaching the gospel of "cold fusion is a fraud." Dr. Huizenga reportedly

has actually witnessed over unity at California Polytechnic Laboratory and STILL cannot accept the facts. Pathological denial is the applicable phrase.

These positive results came to the attention of credible authorities.

The famed futurist Arthur C. Clarke (of 2001 fame), in an interview with *Discover* (May 1997), was unequivocal in support. Several years before, Clarke, in a speech to the Pacific Area Senior Officer Logistics Seminar (March 1993), had briefed senior allied officers on the potential:

“It is beyond serious dispute any more that anomalous amounts of energy are being produced from hydrogen by some unknown reaction...”

Later in 1998, Gerald Celente, founder of the well-known Trends Research Institute, published *Trends 2000* (Warner Books, New York, 1998). Celente was also unequivocal—he designated the new energy revolution based on cold fusion as “the single biggest investment opportunity of the 21st century...for those in the know a financial windfall.”

Celente parallels the statements we have made in this report without the details, although he is obviously aware of the technical detail. On page 304, under the heading “Infinite Energy,” Celente identifies the new fuel to energize the economy as “water...and air...and sun,” adding:

“To tap into energy in the new millennium did not require huge utilities to provide it or a complex infrastructure to mine, drill, refine, process, deliver and store...the promise of free energy, held out by visionaries over the last decades of the twentieth century was made good in the first decades of the twenty-first.” (page 305)

“The most promising of these [technologies] was cold fusion, or new hydrogen energy, discovered in 1989. It was a relatively simple process, but it had scientists baffled.”

Celente commented that even while the U.S. critics were bellowing “fraud,” actual commercial heating units were being produced in Eastern Europe by using a process clearly related to the original discovery (page 306).

The Celente conclusion?

“The energy revolution will be the single biggest investment opportunity of the twenty-first century. Its ramifications will extend to practically every aspect of human and planetary life. To profit from the trend investors should begin familiarizing themselves with the field thoroughly and immediately and keep abreast of developments before they become official.”

This last point ‘before they become official’ is important. There is absolutely no question the US government has “secrecy” stamps all over its work on cold fusion. Below we argue that this is highly counter-productive for national security and national welfare. If one lesson stands out from

the 20th century it is . . . **GOVERNMENTS CANNOT INNOV-
ATE.**

Chapter 3

The Situation in Early 1999

Cold fusion in several variants is a confirmed repeatable process. One of these variants does not require electrodes at all, simply immersion of palladium metal (perhaps other metals) in deuterium gas, (the Case catalytic process). The most important effect is over-unity (i.e., more power is generated by the unit than is needed to operate it, output/input ratio of 3:1 are routine today). There are reports of devices generating much more, e.g., several thousand to one. Our sense is that within a decade the higher ratios will be common.

The most important cold fusion effect is over unity in the form of excess heat. The excess heat generated has to be converted to electricity. Work is now concentrated on devices to utilize low energy heat and its conversion. Heating devices are now at the industrial engineering stage. For example, Japanese researcher Mizuno considers excess heat to be the biggest laboratory hurdle yet to be overcome. In his book, Mizuno cites the case of a runaway cell in his laboratory, which he had to dump in a bucket of water for ten days to cool down.

Thermacore of Pennsylvania with a \$75,000 Pentagon contract has built a device the size of a vacuum flask to heat a house without fuel, reportedly for 1000 years.

We anticipate several engineering routes possible and probable for this engineering task.

Home heaters and water heaters are now in development (reportedly already developed in Eastern Europe, although we cannot yet confirm this report). This will have an immediate and substantial effect on the heating oil industry.

The new standard is therefore over-unity, i.e. over 100% efficiency. Fossil fuels cannot meet this standard. Their efficiencies are in the 15-20% range.

The gasoline fuel cells promoted by the Department of Energy and developed by Arthur Little Company are about 65% efficient. They appear to be aimed at slowing down the shift away from petroleum fuels. DOE could have gone straight to over unity cold fusion (except that it has already committed itself to the "impossible" position). Coal is about 32 percent efficient. The new standard is set by cold fusion. The market will accept these technologies and reject those that do not meet this standard.

There is no way this can be stopped. What we don't know is the time frame.

The chance of extremely low cost heating, virtually no cost, will be so powerful that it will sweep away any opposition. The burden of heating cost in the North Eastern U.S. is so great that any opposition is unlikely.

This is a non-polluting technology. The entire pollution prevention industry is unnecessary. Regulations and restrictions can be removed . . . there is no pollution to regulate. Incidentally, one of the great mysteries is why the environmental groups, including Sierra Club, have not recognized the non-polluting potential of cold fusion. We brought this to the attention of the Sierra Club four years ago . . . without any response. The only conclusion we can formulate is that without pollution there is no anti-pollution movement, and pollution free energy will remove one of the pillars that supports the environmental industry. In other words the environmental movement is an industry like coal and oil.

Chapter 4

Initial Economic Effects

Only one study of the economic effects of cold fusion is known. It is available in German or English from Dr Josef Gruber of University of Hagen in Germany.

Today's economists have an extraordinary weakness. The field of economics assumes technology as a "given", as a fixed parameter in a static world . . . about as far from reality as one can get. And like physics, modern economists have tried to convert economics into mathematical symbolism based on fixed assumptions.

On the other hand one great contribution of modern economics has been the understanding and promotion of market forces for efficient distribution of resources. The mid-century fascination with economic planning ("planned chaos") has been abandoned in favor of a recognition of market forces.

The Gruber study overcomes the first limitation and explores cold fusion in the structure of an enterprise society. A similar study has been undertaken by Bectel Corporation to estimate movement off the grid system.

Because of inadequate response by the Government it is probable that several industries which would be initially affected are not aware of the coming transformation. Because of this gap in information they have not conducted

necessary studies. This is one of the reasons why we state emphatically that Department of Energy incompetence has significant national security impact. This is a Department that doesn't understand market economics and neither does it understand the technology of cold fusion.

The initial impact, as Bechtel has foreseen, will be on the electricity grid. But in addition to withdrawal from the grid system there will be wrenching change for the heating and cooling industries., These latter will be impacted probably before the grid system because space heating units can be developed before heat to electricity conversion units.

Because of weakness in the official academic -government structure this aspect has been entirely ignored.

The "wild ride" foreseen by a senior Federal Reserve Bank official (see FTIR January 1999, in bibliography) can be smoothed by withdrawing funds from coal, oil and atomic technical research and devoting funds to cold fusion research. Today Government policy is exaggerating the complexity and impact of changeover. Policy is designed to keep us in the 19th and 20th centuries while the market, reflecting citizen ability and demand, is urging us into the 21st.

The efficiency differences are so astounding that Government retreat from science funding is an elementary first step. Today we have the equivalent of financing stage coach research as the automobile enters production in 1900. DOE denies cold fusion research funds while funding coal, oil

and atomic research. This is what we call "planned chaos", after the late, great Ludwig van Mises who foresaw these absurdities in a different context.

Another step is to alert initial impact industries of likely future changes. Not only the electricity grids, heating and cooling industries, but more obscure groups. Even the travel industry will be effected, real estate in isolated areas, the pipeline network and steel pipe mills. Coal mining and coal mining machinery, coal transportation, petroleum exploration and development and many others will receive some initial impact.

In particular the strategic balance will be changed. The requirement to defend the Middle East is reduced. In fact the quickest way to bring peace to the Middle East is to push cold fusion research. Without Iraqi oil exports there is no Iraqi armament industry.

This reduction in some industries is offset by rapid, very rapid, expansion in light manufacturing and metal working industries which can manufacture cold fusion devices on a gigantic scale. There will be expansion in chemical catalyst industries, although it is not yet certain that palladium is the cheapest usable catalyst. Obviously deuterium gas will be a winner. In brief, wrenching changes in the structure of industry. Losses for the slow moving. Profit for the alert. Disaster for those who listen to the self-promoting talking heads in Washington, major Universities,

and a senile daily press.

The greatest danger is political. That politicians will dump the financial load onto citizens whereas in an enterprise society the enterprise bears the weight of losses as well as advantages of profit.

Chapter 5

Timing

This is the tough question: when? When will reality hit the market place? How suddenly and over what period of time? Will it be panic free-fall or slow erosion of prices?

Censorship will not stop these new energy technologies. Censorship will delay public awareness . . . markets will take longer to discount the news. That's about it.

Former Defense Secretary Casper Weinberger's comment that Government is concerned about speed of events makes sense. This is the way governments think . . . but even governments are helpless against markets. The Soviet Union discovered this truism. Sensible governments like sensible investors don't try to fight market trends.

Moreover, Weinberger's comment is reinforced from an unusual source—a radio interview from Gordon Novel (one-time intelligence operative now in a federal jail) by Don Weideman (printed in Freedom Forum, October 1996). Novel had links to the CIA and was on a friendly basis with former CIA Director Bill Colby.

This interview refers accurately to physicist Hal Puthoffs research on zero point energy and states “the government knows that energy is free” and “the motive of the New World Order is to stop technologies that eliminate oil, gas, coal and nuclear energy that make it possible for people

to get energy for nothing.” Novel concluded, “They’re petrified at the advent of these technologies, which is right around the corner.”

To continue, the potential in new energy technology is so extraordinary that if held back and then released suddenly it can bring about the very panic that government is reportedly trying to prevent. Release of pressure over time is safer than sudden release. Government has reason to be “petrified.” The magnitude of the change is above anything we have experienced, including World War II.

More likely the government is attempting to delay market awareness to enable its corporate friends to restructure their market position . . . this “policy actions in exchange for political contributions” stance is endemic in the Clinton Administration.

Imagine the horror of the pension funds, the mutual funds and other investment vehicles to find that their key investment targets are about to become worthless. They have paid their dues in the form of campaign contributions and they want something back (as we saw in the Larry Lawrence-Arlington National Cemetery affair). The pressure of the status quo vested interest on the White House is enormous.

In the long run, of course, such political games are useless—a waste of time and money. They can delay but not remove. They may aid the favored political few but to the disadvantage of the many. What happens is, change in the

mix of winners and losers. The most sensible procedure for society and the economy as a whole is to allow free markets and free flow of information.

This is unlikely in the case of new energy technology because presently influential groups (Novel says New World Order) are desperately fixed on keeping their financial and intellectual investments intact.

For a moment imagine yourself a board director of Shell or AMOCO and your research director has a report from your own laboratories that concludes the cold fusion process is valid and has achieved over unity. (This is actual fact for Shell and AMOCO). The elementary fact is that oil, gas, and coal are maybe 15 to 20 percent efficient and you are looking at a verifiable 100 percent competitor.

What we can say with certainty is that the new technology will be dominant by the end of the 21st century, probably before 2050.

This is also futurist Arthur C. Clarke's view and his track record is excellent. A similar view, but less forthright, is held by Gerald Celente, president of the well-known Trend Research Institute.

Celente says new energy technology will be the "single biggest investment opportunity of the 21st century."

The decades of equipment changeover from now to 2050 will be overflowing with opportunity but also will

create extraordinary losses for the uninformed or the slow and tardy who operate on denial rather than analysis. This is heads up time for energy investors.

Government and utilities are already pressing for legislation to pass losses onto the consumer. California is scheduled to vote on a \$7 billion bond issue to retire utility debt. This is to remove the burden from stockholders onto the public. It will, however, even if passed, be insufficient. The Los Angeles Department of Water & Power debt alone is about \$7 billion.

At some point the cat is out of the bag. The unknown factor is when the information in this report will become general public knowledge. It is conceivable, but unlikely, that the government can delay for decades if the news media continues unresponsive to any evidence of new energy technology. This is unlikely.

Our sense is that the period 2000 to 2005, maybe 2010 will see financial panic and wholesale dumping of any financial asset related to fossil and atomic energy. This could spill over onto the house of cards built on derivatives and junk bonds. The precise time depends on public awareness. This suggests immediate pruning of investments. There is definite potential for panic and free fall in stock prices.

Oracle lost 30% in one day and Oracle has a more favorable future than many energy stocks. Balance against this the increasing world demand for energy which acts as a

cushion to some extent.

Timing? It is better to be safe than sorry, so move with deliberate speed. Historically, our analyses tend to be way ahead of the pack (i.e., on Soviet technology we were 20 years ahead of CIA, according to William Casey).

But remember that Zapata Offshore, owned by the Bush family with excellent intelligence resources, got out of oil and gas completely some years ago. You still have time to think, check and evaluate. You do not have time to admire the scenery.

We see strong probability that the market will begin to discount the energy revolution in 1998-1999. We are first to warn but we have limited circulation. We don't affect the market. If Kiplinger or Barrons prints these facts . . . watch out.

Announcements from firms now in pre-commercialization of new energy devices look to 1998, and have done so for some years. Slippage in introducing new technologies is common. On the other hand there are no extraordinary engineering problems left to be solved. FTIR at one time considered the low energy heat to be a barrier but conversion of low energy heat to electricity has been looked at carefully with polymers as one solution. These devices should be available shortly after the turn of the century. The media blackout cannot continue once devices are in general use and will collapse quickly. Generally, be skeptical about reporting in the general media. It will not give you

the full story.

Briefly, this is the first call. You have time. Above all, be prepared for sudden moves in the energy market. But don't get caught with the investing herd looking for the exit.

If you need reinforcement or want a second opinion, because you are highly risk averse, take a look at *Infinite Energy*, edited by Dr. Eugene Mallove (see Reference section).

Chapter 6

Opportunity

From the economic viewpoint new energy technologies are different to fossil fuels where fortunes are made by monopolies or resource scarcity. New energy is structurally more competitive and adapted to small engineering firms in a competitive marketplace where the best product wins out.

There are many reasons for this view (elaborated in *The View From 4-Space*). Essentially, the fuel is space or water universally available. The device is not complex in itself. Technical expertise is the key to success and is the core input. Not only are monopolistic elements absent but there is — even this early in development — a range of competitive processes.

The rewards for a successful device are unbelievable, even without any monopoly elements. Martin Fleischmann once calculated that the first commercial device will be worth about \$300 trillion. But he assumed monopoly. In fact, even at this early stage competitive systems are emerging . . . different engineering to the same end.

The market is global, vast beyond imagination, and will be divided among several or many competing systems. For once in human history we have the opportunity to eliminate scarcity, the basis of economics. We are looking at the impossible: what is the demand for an almost free good, a

necessity worldwide in an almost free market? While supply cannot be monopolized, there are virtually no costs (only device engineering) and no economies of scale.

For a product with these properties the word “risk” takes on a different meaning. When this penetrates the financial community the pioneers will have trouble turning away the investment capital offered. The single major problem will probably be the flood of scams. We have already seen with the Dennis Lee free energy cross country tour...investors actually handed over funds without sight of the device. In fact, Dennis Lee had no device, just a car load of promises...and a rap sheet for fraud.

The rewards are more than monetary. And the losses more than financial. There is the psychological reward that these technologies will solve many of the world's nagging problems. Energy becomes almost a free good like air and water. Non-polluting, non-political, non-monopolizing. With these possibilities risk becomes secondary. The sociological and political spill over is heavy. The world of pork bellies and derivatives become trivial, and a competitive structure ensures that monopoly profit is not available for political objectives as New World Order and political influence. Today there are a dozen genuine ground floor opportunities and more in startup (where we have no track record).

Lack of U.S. government support has forced R&D into the private sector. This is tough on individual developers but in the long run will speed development and benefit society. We are skeptical about government involvement, it

turns development into a political football. And the same tired old revolving door specialists will attempt to use government access to gain control. The private approach is fairer, much faster, more practical and has more benefits to society, although pioneers like Pons and Fleischmann have carried a heavy personal burden. In the long run this is the beneficial road for society as a whole.

Above all this is technology with no monopoly controlled inputs, there is no argument for government regulation. The only input apart from technical know-how is space or water. Even the electrodes cannot be monopolized. To be sure there is scarcity of platinum and palladium but titanium, nickel and silver have also been used as well as solid state devices. In brief, the barriers to entry are low, being mainly technical expertise.

The technology is now available through licensing to any entrepreneur with technical ability, some capital and market knowledge. The problem today is not reproducibility of the over unity effect but to reproduce the conditions necessary to achieve the effect (i.e., electrode surfaces). This simple point is vital and has been overlooked by science orthodoxy and the media community. This is why technical expertise is vital.

The urgent factors for technology are those associated with mass production and automated processes in materials science.

We list below companies today developing components or systems in cold fusion technology. At the time of this

writing (December 1997) some of these firms are interested in discussing partnerships or investment.

We cannot of course predict who will succeed but we are satisfied with the technical ability of each firm cited. These firms already have technical efficiency. They are now ready for the marketplace to test their efficiency against each other. These are not Dennis Lee scam operations. These are run by technically competent pioneers with years working on the technology of cold fusion.

For more substantial investors who want to spread their risk under capable management and who can qualify as "accredited investors" there is a partnership proposal available with a minimum investment of \$250,000:

NEW ENERGY PARTNERS, L.P., Greenwich, Connecticut,
Managing Partner: Daniel J. Cavicchio Jr.

Cavicchio is a known business executive (Marquis Who's Who) with an excellent track record. First with the consulting firm McKinsey & Company, later with American Can as director, business development, and since 1984 founder of Greenwich Venture Partners Inc., specializing in turn-around situations. Contact: Daniel J. Cavicchio Jr., New Energy Partners, 8 Sound Shore Drive, Suite 100, Greenwich, CT 06830.

TRENERGY INC.

President, Hal Fox

Major asset: license rights to the plasma injected transmutation technology (a variant of cold fusion). Stock registered for sale only in Utah and Nevada at this time (October 1997). Applied for sale of 500,000 common stock at \$2.00 a share. Contact Tom or David Morrison in Salt Lake City, 1-800-891-7779.

PACE (Planetary Association for Clean Energy).

Dr. A. Michrowski, President. 100 Bronson Avenue, #1001, Ottawa, Canada K1R 6G8.

PACE was founded in 1977 on the initiative of Hon. Chesley W. Carter, chairman of the Canadian Senate Standing Committee on Health, Welfare and Science. PACE has the North American license rights for Browns gas (with unique capacity to reduce radiation in atomic waste). U.S. Dept. of Energy is suppressing data. PACE is reputable organization and has more credibility than Department of Energy. Looking for research partners. Already used worldwide for high temperature welding (6,000 degrees). Same principle

as cold fusion—low temperature nuclear reaction.

JET ENERGY TECHNOLOGY INC.

President, Dr. Mitchell Swartz. Phone: (617) 237-3625
(voice/ fax)

Sells research kits—over unity guaranteed—for research only. (Note: these demand strong technical ability).

BLACK LIGHT POWER Inc.

Malvern, Pennsylvania

Dr. Randall Mills started with the Pons-Fleischmann discovery using light water, potassium carbonate electrolyte and nickel electrodes. More recent work has used high temperature hydrogen gas and achieved high output/input ratios. The Oregon-based Pacific Corporation has invested \$1 million in Black Light Power along with local Pennsylvania investors.

It is reported that Reading Energy and Atlantic Energy have investment under construction. The financial adviser

is Dr. Shelby Brewer, former assistant secretary for energy in the Reagan Administration. Black Light Power Inc., Great Valley Corporate Center, 41 Great Valley Parkway, Malvern, PA 193554; Fax: (610) 651-4940.

NOVA RESOURCES GROUP INC.

1553 Platte Street, Suite 301, Denver, Colorado 80202

Contact: Chip Ransford, (303) 433-5582

Manufactures electrochemical equipment for cold fusion work, including IE system, a desktop cold fusion lab with dual or single calorimeter/stoichiometer. \$4,000-\$6,000.

CLEAN ENERGY TECHNOLOGY INC (CETI)

One Lincoln Centre, 54000, LBJ Freeway, Suite 950, Dallas, Texas, 75240

Actively seeking qualified research and development partners. Has Patterson coated beads system and U.S. patents. Research kits over unity guaranteed with a one year license.

MAGNETIC POWER INC.

Box 880, Sebastopol, California, 95473; Fax: (707) 829-1002 Contact: Mark Goldes

Works on devices to convert low temperature heat to electricity, developed polymers, with low heat thermoelectric modules for cooling and heating. Of interest to cold fusion technology. Not limited to cold fusion. Voice: (707) 829-9391

HYDRO DYNAMICS INC.

Rome, Georgia

Contact: James Griggs; Voice: (706) 234-4111

ENECO

University of Utah Research Park, 391-B Chipate Way, Salt Lake City, Utah, 84108

Contact: Fred Jaeger

Patent licensing, joint ventures, co-operative research in low energy nuclear reactions in solids.

THE BOELERWORKS

Diamondhead, Mississippi Contact: Evan Ragland

Manufactures the TRC series of cold fusion test reactors. These are designed for university or company laboratory under a performance guarantee of 3:1 output/input ratio.

KINETIC HEATING SYSTEMS INC.

Cumming, Georgia, 30130; Phone: (770) 889-8642, 1-800-496-4332; Fax: (770) 889-2740

The Pope-Perkins Kinetic Furnace Commercial prototype now in testing. Water fueled. Routinely achieves over unity ratios of 1.2:7.

CASE CATALYTIC FUSION PROCESS

Fusion Power Inc., Newfields, New Hampshire Contact:
Dr. L.C. Case

Uses off-the-shelf catalysts (activated carbon loaded with palladium). Positive test reports. Case now exploring commercialization for domestic heat and power generation. Case has several degrees from MIT in Chemical Engineering. Looking for joint ventures with power companies.

In brief, there is an emerging ferment of development activity, including private cooperative arrangements between individual designers using various systems and product developers. This is a healthy free enterprise, more productive route than the Big Science/Big Government hot fusion route using taxpayer funds. For example, in this cooperative arrangement if a specific design does not meet performance standards it will be junked, whereas in the Big Government mode the developers will try to continue to keep funds rolling.

The precise marketing point reached by each firm is an in-house secret. However, it can be assumed that water heaters and space heaters are in development. These will be non-polluting, standalone units (there are no economies of scale) not linked to the grid and with low maintenance. The capital cost of generating electricity, relatively small, will be met by the end user. The concept of "utilities" is antiquated. We know prototypes exist. The questions today are

production engineering and marketing strategy.

Movement Out of Oil and Gas

Sooner or later will come the rush to the exit for utilities. Some are already creeping stealthily in that direction.

Without access to boardroom discussions it is almost impossible to determine WHY a company has sold oil and gas assets... Trading assets and properties is common in oil and gas. Further, in some countries there can be regulatory pressure to sell assets. But here are three interesting cases:

Zapata Corporation

Zapata Offshore Co. was founded in 1954 by former President George Bush, and partners to develop oil and gas properties. By the 1980s, Zapata developed into a sizable company. Also during this time, George Bush became first director of the CIA, then vice president, and finally president of the United States. We know that CIA collects data on new energy technologies. By the early 1990s Zapata had sold ALL its oil and gas properties and the Bush family sold Zapata to Malcolm Glazer who has taken the company into the fish protein business.

Calculated disinvestment of lucky chance?

UNOCAL Sales

On February 21, 1996, the *New York Times* reported the following:

“In a continuing trend by major oil companies to sell off domestic assets to finance exploration overseas UNOCAL said yesterday that it was selling its oil and gas fields in California for \$500 million...”

Properties are being moved from majors to independents who then cut costs and contract out operations.

Calculated dis-investment or lucky chance?

Update at July 1, 1998

In the last few months new discoveries and advances have been made. The most significant is the emergence of work by chemical engineer Dr. Leslie Case. In May, Case, formerly unknown, announced that he had been working for six years on catalytic cold fusion and was awaiting grant of the patent. The Case catalytic cell is a tested, reliable generator of excess heat, simple and cheap.

The process is deceptively simple: heat palladium, activate carbon in deuterium (heavy hydrogen) gas. No electrolysis. Generates reliable excess heat at temperatures higher than P-F cold fusion ($>150^{\circ}\text{C}$, up to 250°C).

From the industrial engineering viewpoint, the Case process has the advantage of extreme simplicity. We antici-

pate numerous workers will follow up with demonstration units. All the equipment is available off the shelf and ideal for university laboratory work. The catalyst is commercially available and deuterium gas is cheap and plentiful. (International Patent No. WO 97743768, published Nov. 20, 1997).

The Case catalytic cell appears to be far and away the most useful cold fusion device yet...and Case has made full disclosure of the technology.

This is what the cold fusion phenomenon needed—the input of an experienced chemical engineer to convert the laboratory phenomenon of “cold fusion” into an industrial engineered product. Cold fusion has now bridged this gap by using catalytic reaction instead of electrical. For details, read the patent (cited above) and *Infinite Energy* (Vol. 4, Nov. 19, 1998).

Combined with the enthusiasm and technical skills of Eugene Mallove, the Case catalytic fusion device is the demonstration device that could break the irrational barrier of “official science.” For more information, contact Cold Fusion Technology, Inc., P.O. Box 2816, Concord, NH 03302. Phone: (603) 228-4516.

British Petroleum

BP is the world's third largest oil company. BP has a subsidiary, British Solar, which has three plants in California, India, and Spain, manufacturing thin film very efficient

solar cells.

BP has sold its oil properties in Colombia and replaced this operation with an office to sell solar technology and equipment.

Chapter 7

Conclusions

We are looking at the impossible. What is the demand for an almost free good, a global necessity in an almost free market?

While supply cannot be monopolized there are virtually no resource costs, only device engineering and production costs and no economies of scale.

For a product with these properties the word "risk" takes on a different meaning. Sooner or later a potential entrepreneur with substantial capital and drive will visualize the opportunities and put together a package of capital and skills to bring the possibility to reality. Sooner or later this will happen, it is only a question of "when".

When this event penetrates the financial world the pioneers will have trouble turning away the flood of capital offered. One problem will be the usual scams, and we've already had examples of this phenomenon.

Rewards are more than monetary. As Methernitha has insisted there are sociological and spiritual aspects. And the losses are more than financial. These technologies will solve many of the world's intractable problems, without Big Government intervention. This is an almost risk free device with the attributes of a free good like water and air. Non-polluting, non-political, non-monopolizing.

The developers will be more powerful than Governments and for this reason the Methernitha Community has up to recently declined publicity for their electrostatic over-unity device. It is difficult to comment on this approach. We are all young in understanding this new technology which is more than just cold fusion and over unity.

Yet in spite of this awe inspiring importance the basic research is still restricted to the backwoods of New Hampshire and a damp cold underground laboratory in Hokkaido Japan, not in the lavish taxpayer funded laboratories in California and Boston. A planet with such screwed up priorities needs to take a good look at itself.

The world of pork bellies and derivative becomes trivial. The competitive nature of the cold fusion structure ensures that monopoly profit is not available for political objectives and influence peddling. In fact much of the vast governmental apparatus can be dissolved as unnecessary. Without the need for oil there is no Middle East vital interest. Without pollution, the pollution industry, and its powerful lobby disappears.

US Government opposition, stemming from the 1989 Bush-Seaborg meeting forced cold fusion R&D essentially into the private sector although some individual government scientists continue to do excellent individual work and of course came under harassment for their dedication.

This peer opposition is tough on individual researchers, especially in the early stages, but in the long run will speed

development and benefit society. Consequently we are skeptical about the need for government involvement beyond funding basic research (as suggested by David Nagel of U.S. Navy) and provision of seed money. Bring in Government and cold fusion development becomes a political football, distorts the resource allocation mechanism and enables the same tired old revolving door operators to use Government access for influence and control. To replace an entrepreneur using his own capital with a technocrat using taxpayer funds is the height of folly. We should have learned that lesson by this time.

The private sector approach is fairer, faster, practical and beneficial to society. To be sure the pioneers carry a heavy personal burden, but this they know and recognize.

This is not monopoly technology. There is no argument for Government intervention. The technology is available by licensing to any entrepreneur with access to technical ability, capital and market knowledge. A start-up entrepreneur doesn't need friends in high places or even lobbying assets. There is nothing the politicians need to do for this technology, except vote some seed money and keep out of the way. The technical problem today is not duplication of a cold fusion process but the more limited challenges of scale up, process control, electrode surfaces and creating the conditions for reproducibility. There are unknowns but these are normal at this stage of any new technology.

References

For a quick authoritative overview get a copy of *Infinite Energy*, a bi-monthly journal edited by Dr. Eugene Mallove, former Press Officer at MIT. Address: P.O. Box 2816, Concord, NH 03302.

Compare this journal to the skimpy and negative comment in *New York Times*, *Wall Street Journal*, and your local Big City newspaper.

More technical detail in:

New Energy News, P.O. Box 58639, Salt Lake City, UT 84158.

Cold Fusion Times, P.O. Box 81135, Wellesly Hills, MA 02181.

Future Technology Intelligence Report, P.O. Box 2903, Sacramento, CA 95812. Monthly since 1990. Subscription: \$65.00 per year.

Safe Aktuell (in German), published by Schweizerische

Arbeitsgemeinschaft für freie Energie. SAFE, Postfach 10, CH- 5704. Egliswil, Switzerland. (This is the Swiss Association for Free Energy).

Confirming Reports from U.S. Government and Independent Sources

1.) NASA (Lewis Research Center, Cleveland). Memorandum No. 107167. Use Mills light water-potassium carbonate-nickel electrodes. Excess heat power gains 1.06 to 1.68.

2.) EPRI (Electric Power Research Institute, Palo Alto). Report, "Development of Advanced Concepts for Nuclear Processes in Deuterated Metals." All cells yielded excess heat from a few percent to 350 percent. Used Pons-Fleischmann system. (a free copy available at dauphinpublications.com)

3.) U.S. Navy (Naval Air Warfare Center, Weapons Division, China Lake, California). Report # NAWCWPNS TP 8302, September 1996. "Compelling evidence that the anomalous effects in deuterated systems are real." Up to 30 percent excess heat.

4.) Los Alamos National Laboratory (Los Alamos, New Mexico).

Books

Mallove, Eugene, *Fire From Ice*. Wiley, 1991.

Manning, Jeane, *The Coming Energy Revolution*. Avery, 1991.

Celente, Gerald, *Trends 2000*. Warner Books, 1998.

Antony Sutton, *The View From 4-Space*, Dauphin Publications 2015.

The Status of Cold Fusion, By Dr. David J. Nagel (Naval Research Lab) Balanced, comprehensive introduction to cold fusion.

Movies

The Saint (on cold fusion). Released April 1997, Hollywood, California.

Free Energy: The Race to Zero Point. Video 110 minutes, \$39.95, from Cold Fusion Technology Inc., P.O. Box 2816, Concord, NH 03302.

Official Science Eliminates its Competition

There are at least half a dozen books by official scientists from MIT, CalTech, and the University of California that purport to explain why cold fusion *cannot* work.

Unfortunately, these authors forget that one can never prove the negative case in science. What these books prove is that science has lost its way and apparently most scientists (in 1998) prefer their theoretical assumptions over observable fact.

Their genius lies in funding, not science. This official group has conned the politicians into funding only their science...and the innocent taxpayer ends up paying their bills. Meanwhile, the honest pioneers have to fund their own research.