

# ELECTRIC UTILITY COOPERATION PLAN

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## Introduction

"If it works, its obsolete," according to Burrus and Griffines, authors of **Techno Trends**, a recent book on how to use technology to go beyond ones competition (1). The electric publicly owned utility industry utilizes a technology which is approaching 100 years in maturity and is ripe for change. Individual companies are searching for ways to grow beyond their service areas by buying into other, less-regulated industries such as insurance and cogeneration. Public Service Commissions are changing the ground rules by permitting other suppliers to use what were 100 percent owned and operated transmission lines to deliver electric power to what were captive customers. The old and time tested electric power supply industry is being placed under increased regulation and new forms of competition. The purpose of this paper is to explore how new energy technology is going to change the industry. It is also an urgent plea for the industry to become involved in new energy development.

Public utility yields are regulated by state Public Service Commissions and they use consultants to go through the utility books at the expense of the utility to insure that no unacceptable costs or supplier special treatments go into the cost structure. Good management is congratulated and poor management, as judged by second guessing the decisions made, is penalized. It has become acceptable to build in modest sums for research and development which are used to fund the Electric Power Research Institute (EPRI). EPRI has funded a program at Stanford Research on cold fusion for about five years.

The electric utility industry is being forced to continue to upgrade present fossil fuel power plants through the addition of scrubbers to reduce air pollutants. These additions are quite expensive and require major capital expenditures. They do not remove carbon dioxide which has become of concern as a global warming source. In the 1994 Global Power Generation Conference and in the "Other Technologies" category, alternatives on the program were: solid waste, wind power, nuclear and fuel cells. Nuclear power is the only source proposed to deal with the carbon dioxide emission problem. New energy was not on the program (2).

Once scrubbers are installed on existing fossil fuel plants, public utilities will become "cash cows" and sources of income with low

**Shouldn't the government be paying attention to a field that has the potential for creating hundreds of thousands of new jobs at all skill levels?**

DR EUGENE MALLOVE,  
INFINITE ENERGY  
MAGAZINE EDITOR

additional capital costs. Astute C.E.O.s are setting up umbrella organizations to put funds generated to other uses having fewer regulatory hassles.

In my discussion with the director of research of a large public utility, he made the observation that we will always need some type of organization to deliver electric power. The source could change from coal to oil to nuclear to the vacuum and their company would still be needed to collect the energy and transmit it to the consumer. What he did not seem to realize is that it is more expensive to convert in central power stations when the energy source is freely available everywhere at all times. It is far more logical to collect energy where it is used.

## **New Energy**

New energy is defined as energy from cold fusion, where fission products are detected, or from zero-point energy. Zero-Point Energy is energy from the vacuum continuum and is responsible for gravity, inertia, the Lamb shift and the Casimir force. It is essentially inexhaustible and has no polluting byproducts. This paper is primarily about zero-point energy.

Many readers of this paper will never have heard of zero-point energy. Inventions in the field of conversion to electricity have been kept out of the popular press and general science literature since the mid-1920s. This is now beginning to change. The first U.S.A. patent to specifically call out zero-point energy as its source was issued in 1992. The first college freshman physics book to include the name zero-point energy was published in 1993. The Institute for New Energy has plans to release video tapes on the subject in the near future. Once the general public learns that it can take control over its own energy supply, it will be like taking the genie out of the bottle.

## **Long Range Forecast**

The need for additional power is normally based on population growth and forecasts are based on past experience. Planning and bringing a large power plant on line takes about 10 years so all public utilities have to know their load requirements 10 years into the future. A new plant, non-nuclear, could cost from one-half to one billion dollars.

It is my forecast that half of the fossil and nuclear fuel plants will be obsolete in 10 years. Furthermore, large central power plants will become superfluous as small zero-energy converters become used at the point of - or close to the point of application.

In 1990 there were 180 major investor-owned electric utility companies in the U.S. These had assets of \$477.9 billion, long term debt of \$167.9 billion, an electric operating revenue of \$157.3 billion and a net income of \$16.5 billion (3). Their long term debt is roughly 10 times their net income. Unless they participate in the change-over to new energy conversion, their bond holders will suffer tremendous losses.

**Today the vacuum [of space] is not regarded as empty...It is a sea of dynamic energy...like the spray of foam near a turbulent waterfall.**

DR HAROLD PUTHOFF,  
PHYSICIST

## Technology Development Stages

Burrus and Gittines divide technology development into five stages as follows (4):

- Stage 1. *Discovery*
- Stage 2. *Identification of practical applications.*
- Stage 3. *Proof of technical practicability*
- Stage 4. *Development and evaluation of prototypes.*
- Stage 5. *Production.*

Stage one has been completed in a few of the zero-point energy conversion methods, including my method.

Technological change is occurring at a faster rate today at any time since the beginning of the industrial revolution. major development are listed below for illustration (5):

Technology	Invention	Production	Development Time
Fluorescent Lighting	1852	1934	39 years
Rockets	1903	1935	32 years
Television	1907	1936	29 years
Transistor	1940	1950	10 years

English has become the international language of commerce so it is possible to communicate with technical people all over the world without the requirement of translators. Letters and drawings can be sent anywhere in the world in 15 seconds per page. I was told by a potential associate group from Switzerland that it has no fossil fuel industry to resist the introduction of new energy conversion. The research director of a 400 man laboratory in the Ukraine has expressed an interest in my method. If the United States is to share in the jobs which will be created from new energy technology, the major investor-owned electric utility cog-flies need to get into the act immediately.

Historically, the United States has not done well in building jobs from discoveries made in this country. Five classical examples are listed below (6).

Technology	Market Share	
	1970	1987
Color TV	90	10
Videotape recorders	10	1
Phonographs	90	10
Machine tools	99	35
Audiotape recorders	40	0

United States inventors working in the new energy field see the transfer of this technology to Asia as our present day, most likely scenario. It is only natural that we wish for the United States to take a leadership position but we have seen no indication of this happening. We have to go forward on the basis of a global market evolving from those countries who have the greatest need. Even so, energy

**Now we are confident that the universe is formed from non-material primary substance, which may be described as the shadow charge that gives birth to all things.**

SHIUI INOMATA AND  
YOSHIYUKI MITA,  
RESEARCHERS

conversion devices will be introduced to the American market soon after introduction in foreign countries.

### **Suggested Plan**

This same research director added that they had no mechanism for dealing with an invention at such an early stage. He said that after the invention is commercialized and sales have reached the \$50 million level, they could then study its acquisition. My thought was that at that level of sales, we would no longer be interested in becoming a part of his company.

The degree of risk with any new venture is a function of its uniqueness and its life cycle. The new energy field is so different that it is going to require the U.S. patent office to set up an entirely new class. We have seen a 100 year life cycle for the conventional steam turbine generator. A reciprocating steam engine was used to turn the generator in my home town when I was a boy. Fossil and nuclear fuels will be unable to compete with an energy source which is free. I expect zero-point energy to become the primary energy source until the end of time.

This is now the window of opportunity for investor-owned utilities to become a part of the zero-point energy conversion industry. Initial investment will be relatively small through Stage 4. At that time large sums of capital will be required but the degree of risk will be minimal.

Average electricity prices in 1990 were as follows:

Residential	\$0.0798
Commercial	\$0.0745
Industrial	\$0.0485

Therefore, we will design for the residential market first with small conversion units. The exceptions will be where large users fund development of their specific part of the market. In 1990, the annual bill per customer was \$1,614. Assuming a three year amortization, this will allow a sales price of \$5,000. Many customers will want to lease rather than to buy so this will establish the large capital requirements.

In the winter of 1991, the U.S. electric capability was 703,212,000 kW. We want to replace one-half of that in 10 years. At \$250 a kW we are going to need \$175.8 billion over that 10 year period. The industrial group with the most experience in dealing with such large sums of money is the investor-owned public utility group.

### **Getting Started**

I do not see any justification for going through the Electric Power Research Institute. They have spent five years funding cold fusion at Stanford Research without generating one commercial product. This present effort is about product development, production and utilization. Some basic research is needed but the major thrust will be on production and marketing. The EPRI - Stanford Research route leads to two unnecessary sources of overhead. Instead, it is suggested that

**Imagine a world in which endless, nonpolluting, and virtually free energy powers our cities, cars, and homes.**

OWEN DAVIES, SCIENCE WRITER

utilities split their budgets between EPRI and a new energy venture in which they will have an ownership position.

It is proposed to set up a new umbrella organization to assign and fund the work which is needed at the time it is needed. Stock in the umbrella organization will be distributed between the initial investors and the utility corporate investors. The board of directors will be made up of members of the two groups.

In return for financing this zero-point energy technology development, the utilities will retain a financial share and distribution rights in their present service areas. There will also be an installation and service role going to the utility. They may move their employees into this new role as it evolves or they may sell their rights. Production will be handled by a production company in which they will have a share.

It is possible that not all of the 180 utilities will come into the program. Their area will be either sold to the highest bidder or spread between the surrounding distribution rights owners. For those who wish to come in later, their cost per share will increase as the degree of risk decreases.

It is anticipated that interested utilities will share in developing the plans for this new organization rather than requiring a set plan in which they must vote up or down. Funding will be needed to develop the plan but participants may drop out after the plan is developed. Deadlines will be required as we have to decide where we are going to concentrate our efforts, in the U.S. or overseas.

#### Summary

A means of involving the major investor-owned electric utilities in zero-point energy conversion is described. Their participation will greatly facilitate the change in the U.S. from fossil and nuclear fuels to vacuum energy. The alternative to their involvement is to either develop the technology overseas or work through a venture capital fund.

(1). Daniel Burrus with Roger Gittines, **Technotrends**, Harper Business, NY, 1993, p. 13.

(2). **POWER-GEN '94 Americas**, Conference Program & Exhibitor Information, December 7-9 1994, Orlando, Florida USA.

(3). **Statistical Abstract of the United States**, 1993, 113 Ed., U.S. Department of Commerce.

(4). Burns and Gittines, p. 79.

(5). Ibid. p. 81.

(6). Ibid. p. 174.

**The only reason we're years away [from alternatively powered cars] is political. It's not scientific.**

DR JOHN O'MALLEY  
BOCKRIS, PHYSICIST