

# **Accepting Nuclear “Attributes” from Diablo Canyon Would Violate MBCP’s Central Mission: Clean Power, Community Choice**

Presentation to the Policy Board of Monterey Bay Community Power  
by Daniel Hirsch

Retired Director of the Program on Environmental and Nuclear Policy  
University of California at Santa Cruz  
10 June 2020

# **MBCP's Promise & Mission:**

- 1. Community Choice**
- 2. Clean Energy**



MBCP + YOU =  
Clean Energy



MBCP + YOU =  
Clean Choice

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# Understanding Clean Energy

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Community Investment

# Ensuring a Bright, Clean Future

**MBCP Has Also  
Repeatedly Pledged  
that it Would be  
Nuclear Free.**

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## Blog Article

[Home / New, 100% Renewable Energy Service Offering – MBprime](#)

JULY 1, 2018

MBCP procures electricity from carbon-free sources such as solar, wind, and hydroelectric. In addition to being carbon-free, MBCP does not use power produced from nuclear energy or any fossil-based sources.

“MBCP procures electricity from carbon-free sources such as solar, wind, and hydroelectric. In addition to being carbon free, **MBCP does not use power produced from nuclear energy** or any fossil-based sources.”

MBCP blog article, July 2018



"it's been staff practice **not to acquire energy that's generated from coal or nuclear power** plants. Staff has shared this practice with the new jurisdictions from San Luis Obispo and Santa Barbara and some, have partially, based their decision to join MBCP on the assumption that we'll continue that practice."

Staff Report March 4, 2020

The controversy before us today is that MBGP is being asked nonetheless to take nuclear “attributes” from PG&E.

There is no such thing as an energy  
“attribute” separate from the energy itself.

It is a fiction, designed to be able to tell the  
consumer they are getting “carbon free”  
energy when in fact some of the energy  
actually being purchased comes from  
system power that includes natural gas (and  
some coal).

It is like the “indulgences” sold by the Church for sins, a practice which led to the Protestant Reformation. You could sin all you want so long as you bought an indulgence.

If I offer to give you a dog's attributes--constantly barking, running after skunks and bringing the stench into the house, and fleas--but retain title to the dog, you wouldn't think it a great deal.



“b. Challenges [to accepting the nuclear allocation]:

i. Public scrutiny over accepting CFA associated with nuclear generating facility.

ii. MBCP's Power Content Label (score card that MBCP is obligated to submit to the CEC) would include up to 20% nuclear power.”



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**34%**

**RENEWABLE**



● Geothermal	12%
● Solar	11%
● Wind	11%
● Biomass & Biowaste	0.3%

# 20%

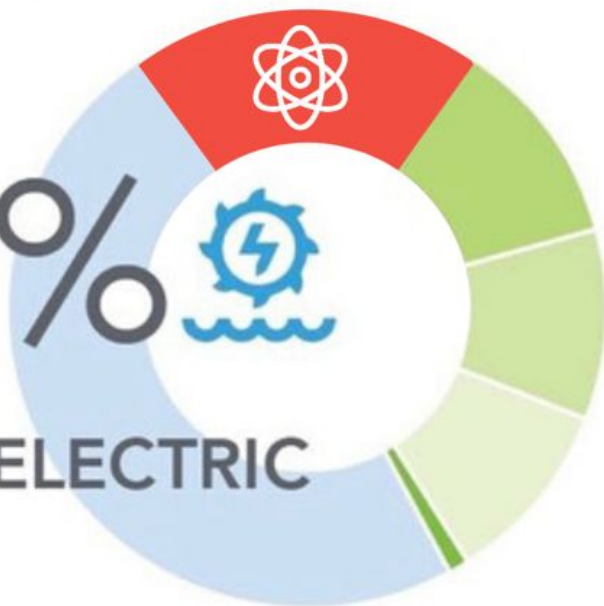
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**So, what are the  
“attributes” of nuclear  
power, and is it “clean,”  
consistent with MBCP’s  
mission?**

# The “attributes” of nuclear power:


1. Radioactive waste that is dangerous for tens of thousands of generations
2. Proliferation of nuclear weapons
3. Risk of meltdown and widespread contamination
4. Risk of terrorist attack releasing large amounts of radioactivity
5. Environmental justice impacts from pollution from uranium mining and milling
6. Diverts money from renewables
7. Lower carbon emissions than fossil fuels but higher than renewables; not “carbon free”



It is not Clean:

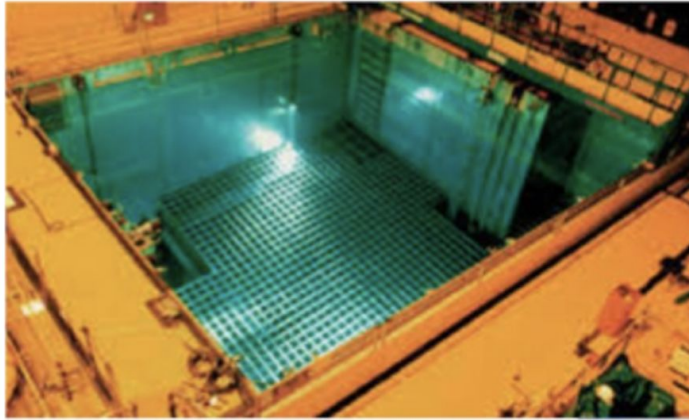
**Immensely  
Long-Lived  
and Toxic  
Nuclear Waste**



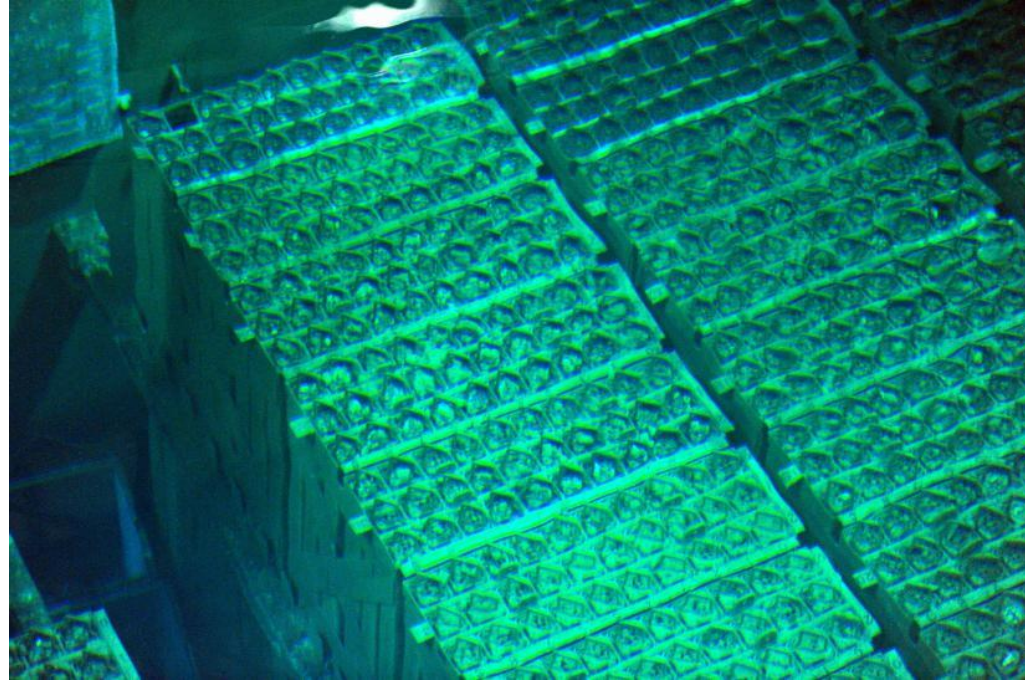
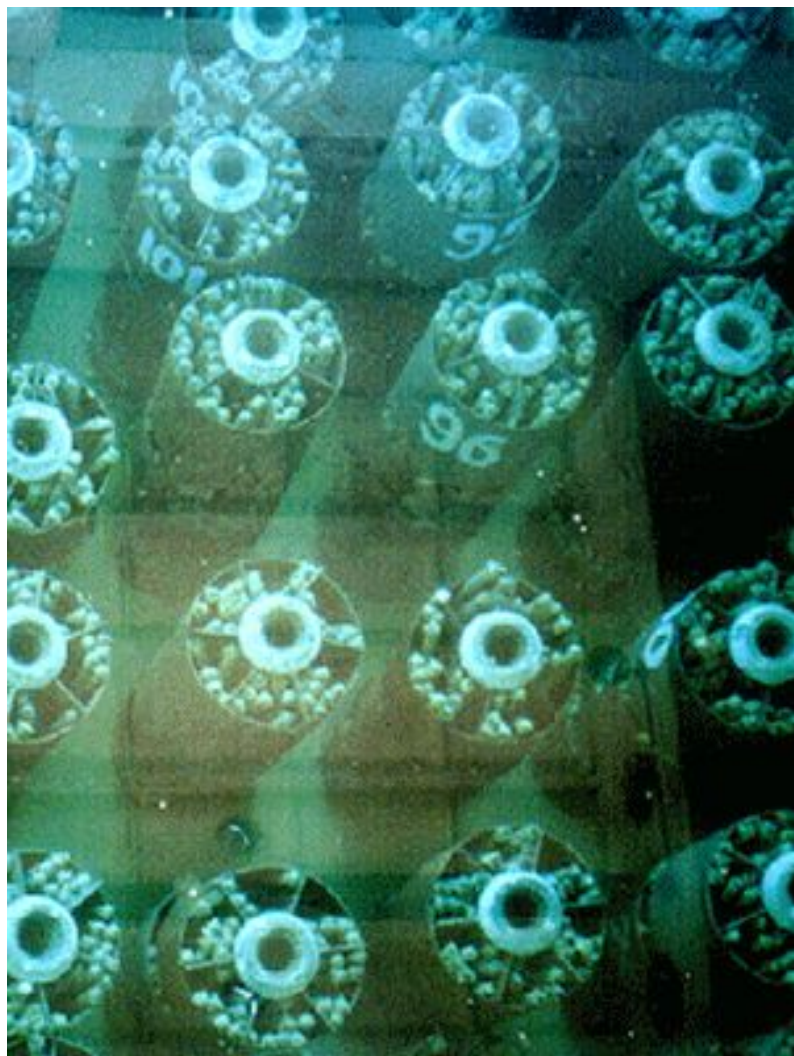
An aerial photograph of a nuclear power plant. Four large, concrete cooling towers are visible, two on the left and two on the right. The towers are surrounded by various industrial buildings and piping. A river flows in the foreground, and a forested area is visible between the river and the plant. In the background, a city and hills are visible under a clear sky.

NUCLEAR POWER PLANTS  
have produced energy *and...*  
*highly toxic nuclear waste*

Nuclear  
Power  
produces  
immensely  
long-lived  
radioactive  
waste.







**Irradiated nuclear fuel rods**

# 50 Years of Power, 500,000 Years of Radioactive Waste

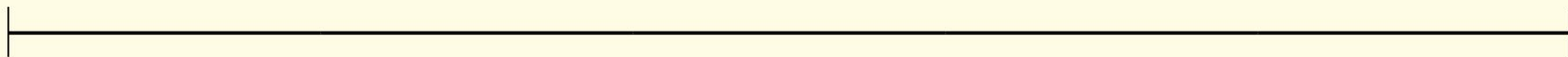
Existence of the United States - *244 Years*

.

Existence of Human Civilization - *~12,000 Years*

┌

Amount of Time Nuclear Waste Remains Radioactive - *500,000 Years*



25K —

100k —











human cells from beta rays or alpha particles)

**Iodine-131**  
beta (gamma), 8 days

## SKIN

**Sulfur-35**  
beta, 87 days

**Cobalt-60**  
beta (gamma), 5 yrs.

## OVARIES

**Iodine-131**  
gamma, 8 days

**Cobalt-60**  
gamma, 5 yrs.

**Krypton-85**  
gamma, 10 yrs.

**Potassium-42**  
gamma, 12 hours

**Cesium-137**  
gamma, 30 yrs

**Plutonium-239**  
alpha, 24,000 yrs.

The reproductive organs are attacked by all radioactive isotopes emitting gamma radiation. In addition, the deadly Plutonium-239 is known to concentrate in the gonads. The radiation it emits can cause birth defects, mutations and miscarriages in the first generation after exposure and/or successive generations.

## MUSCLE

### Potassium-42

**Cesium-137** (and gonads)  
beta (gamma), 30 yrs.

## LUNGS

**Radon-222 (and whole body)**  
alpha, 3.8 days

**Uranium-233 (and bone)**  
alpha- 162,000 yrs.

**Plutonium-239 (and bone)**  
alpha, 24,000 yrs.

**Krypton-85**  
gamma, 10 yrs.

## SPLEEN

**Polonium-210**  
alpha, 138 days

## KIDNEYS

**Ruthenium-106**  
gamma (beta) 1 yr.

## BONE

**Radium-226**  
alpha, 1620 yrs.

**Strontium-90**  
beta, 28 yrs.  
and more.

The times listed next to the type of ray emitted are the half-lives: how long it takes for half of the radioactive material to break down.

**If you ingest alpha and beta emitters, they set up permanently next to the marrow of your bones, in your reproductive organs or elsewhere.**

**The effects of ionizing radiation are not immediate. Exposure to radiation can cause cancers many years later. Exposure to very low levels of radiation can be equally dangerous over time.**

#### Authorship notes

Based on a review by Katherine North and Jennifer Hoffmann, from the South  
The National Film & Television Archives in the Third World by  
Theresa de Courcy, University Park and James Hoffmann, World Information Service  
of Toronto (WISOT), The Netherlands, 1980. An earlier version of this material  
in the book has been revised by James Hoffmann and Jennifer Hoffmann, 1979, 1976.  
Information supplied by James Hoffmann, University Park, PA, USA, 1980, 1980,  
1980. Note: This report is now known as the North-Hoffmann Report.

# Ionizing Radiation Causes Cancers, Leukemias, Genetic Defects in Offspring, Heart Disease, and Various Other Health Effects

**It is not Clean:**

**Nuclear Power  
Proliferates  
Nuclear Weapons**







**Diablo Canyon, for Example, Produces  
Half a Ton of Plutonium per Year –**

**Enough for *250 Nuclear Bombs*  
More Powerful Than the One  
That Destroyed Hiroshima**









It is not Clean:

**Nuclear Power Plants Can  
Suffer Meltdowns, Releasing  
Vast Amounts of Radioactivity  
and Rendering Large Areas  
Uninhabitable for Generations**

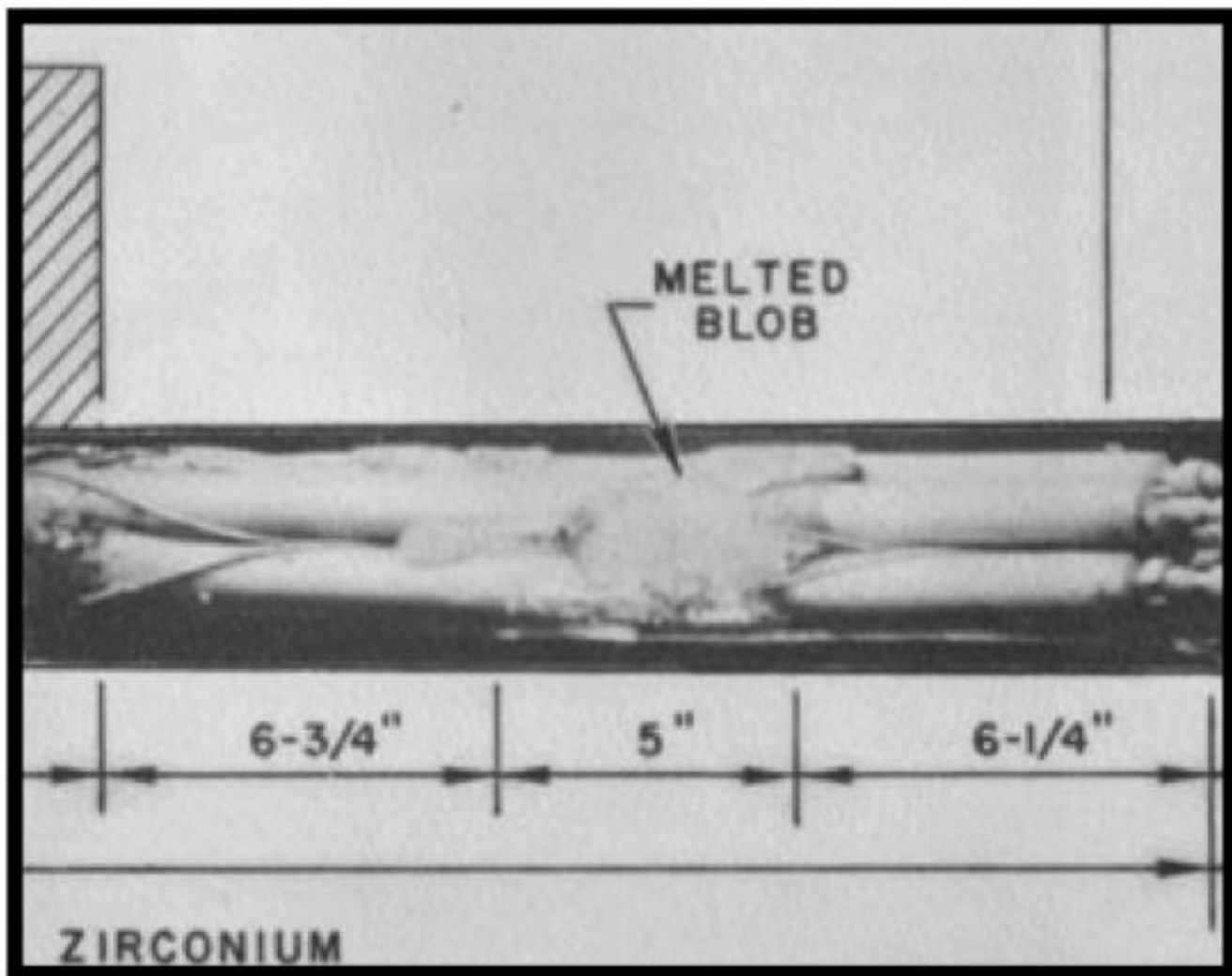
**SANTA  
SUSANA FIELD  
LABORATORY**

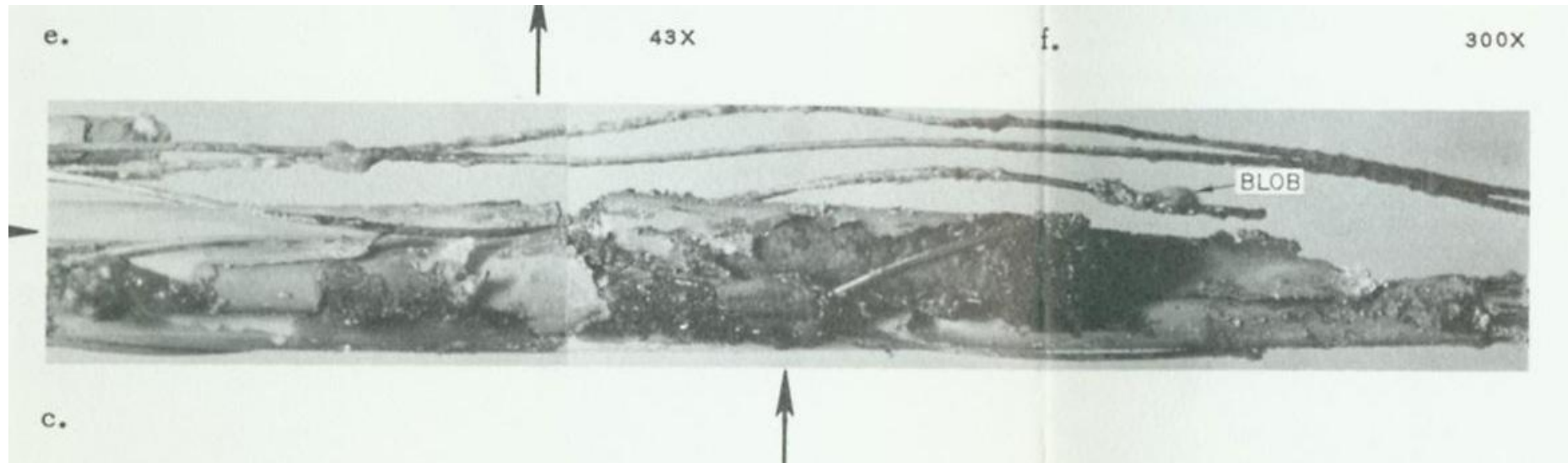
The first reactor to produce electricity for the commercial grid was at the Santa Susana Field Laboratory on the LA-Ventura County line.



**It was also the first to suffer  
a partial meltdown.**







Melted Fuel from SRE Reactor in LA Area

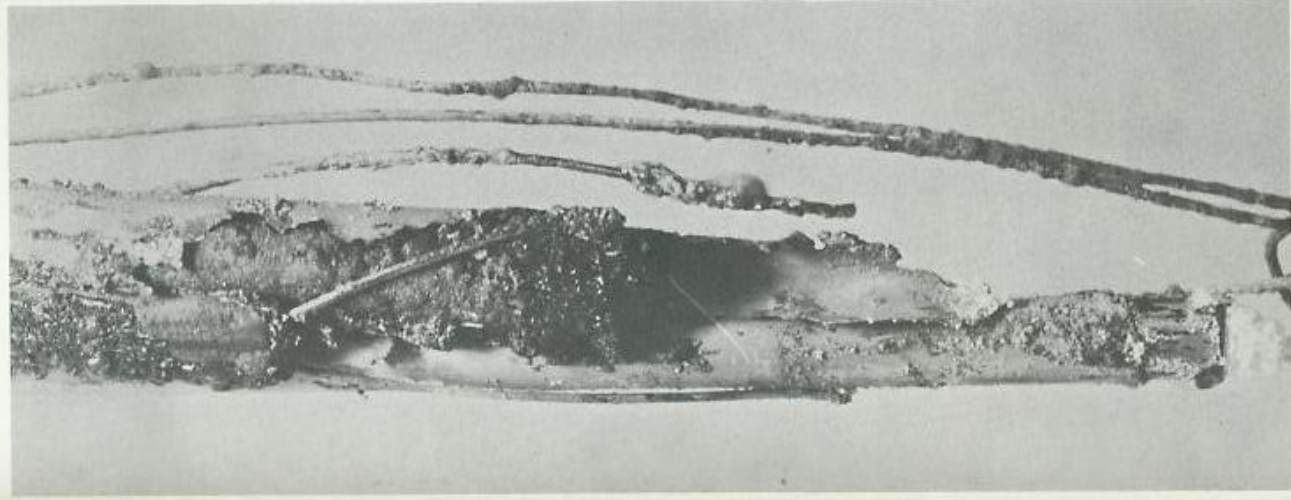


Figure IV-A-6. Bottom of Damaged  
Element in Channel 55

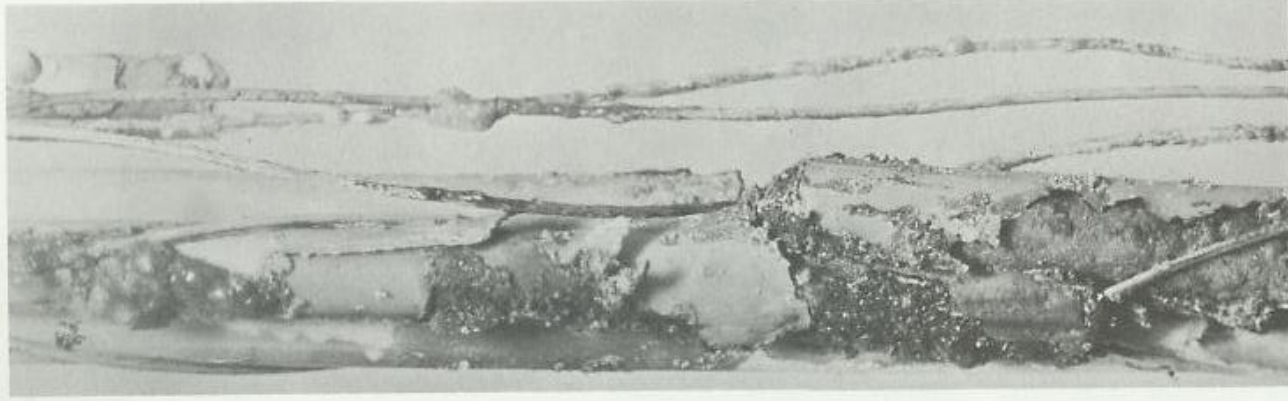


Figure IV-A-7. Midsection  
of Damaged Element in  
Channel 55

**It was not the last.**

**THREE  
MILE  
ISLAND**

**Met-Ed / GPU**

**THREE MILE ISLAND  
NUCLEAR  
GENERATING STATION**

**Authorized Personnel Only**

**OBSERVATION CENTER  
3/4 Mile Ahead**







## NUCLEAR ACCIDENT AT THREE MILE ISLAND

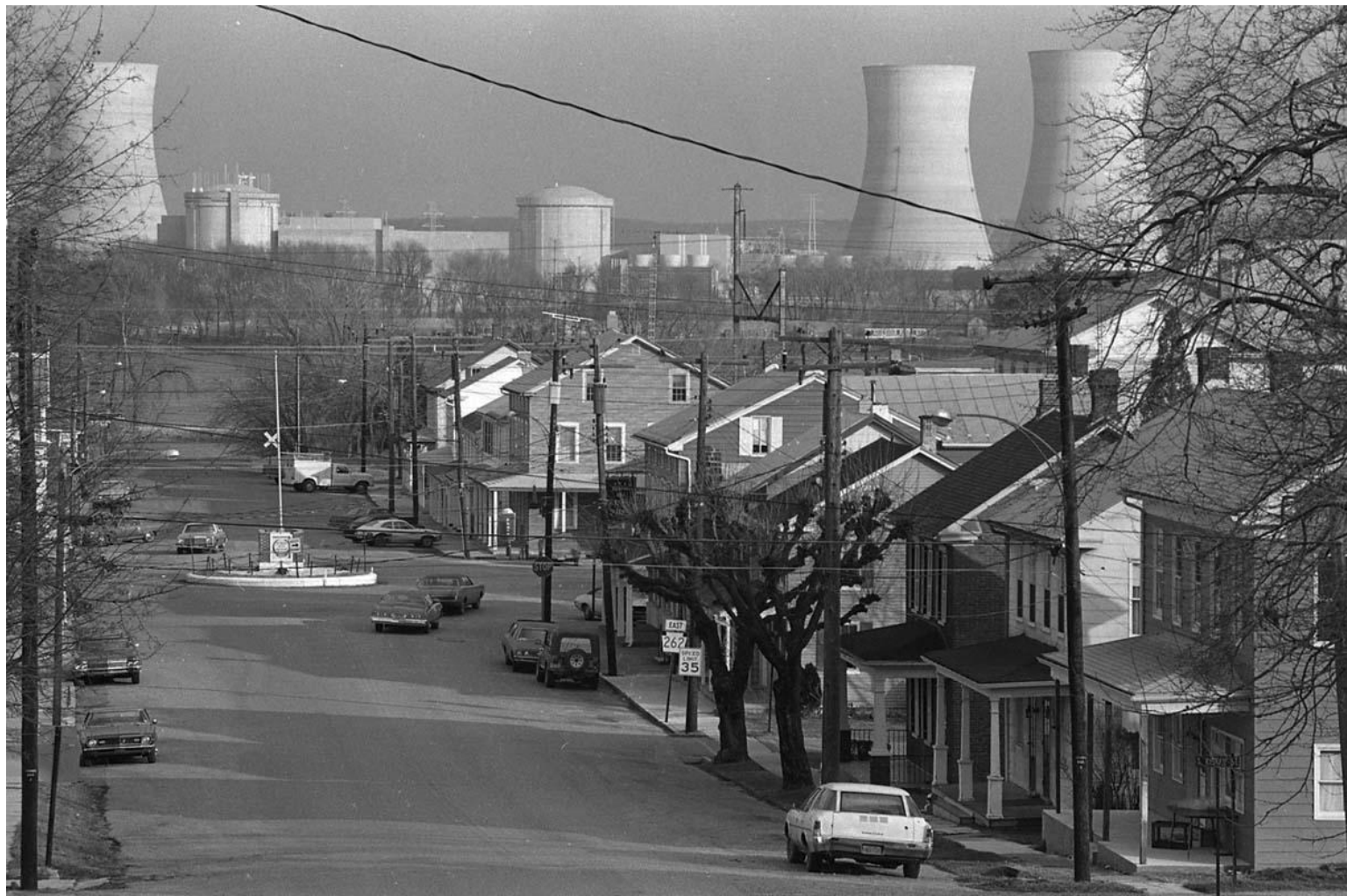
On March 28, 1979, and for several days thereafter -- as a result of technical malfunctions and human error -- Three Mile Island's Unit 2 Nuclear Generating Station was the scene of the nation's worst commercial nuclear accident. Radiation was released, a part of the nuclear core was damaged, and thousands of residents evacuated the area. Events here would cause basic changes throughout the world's nuclear power industry.

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

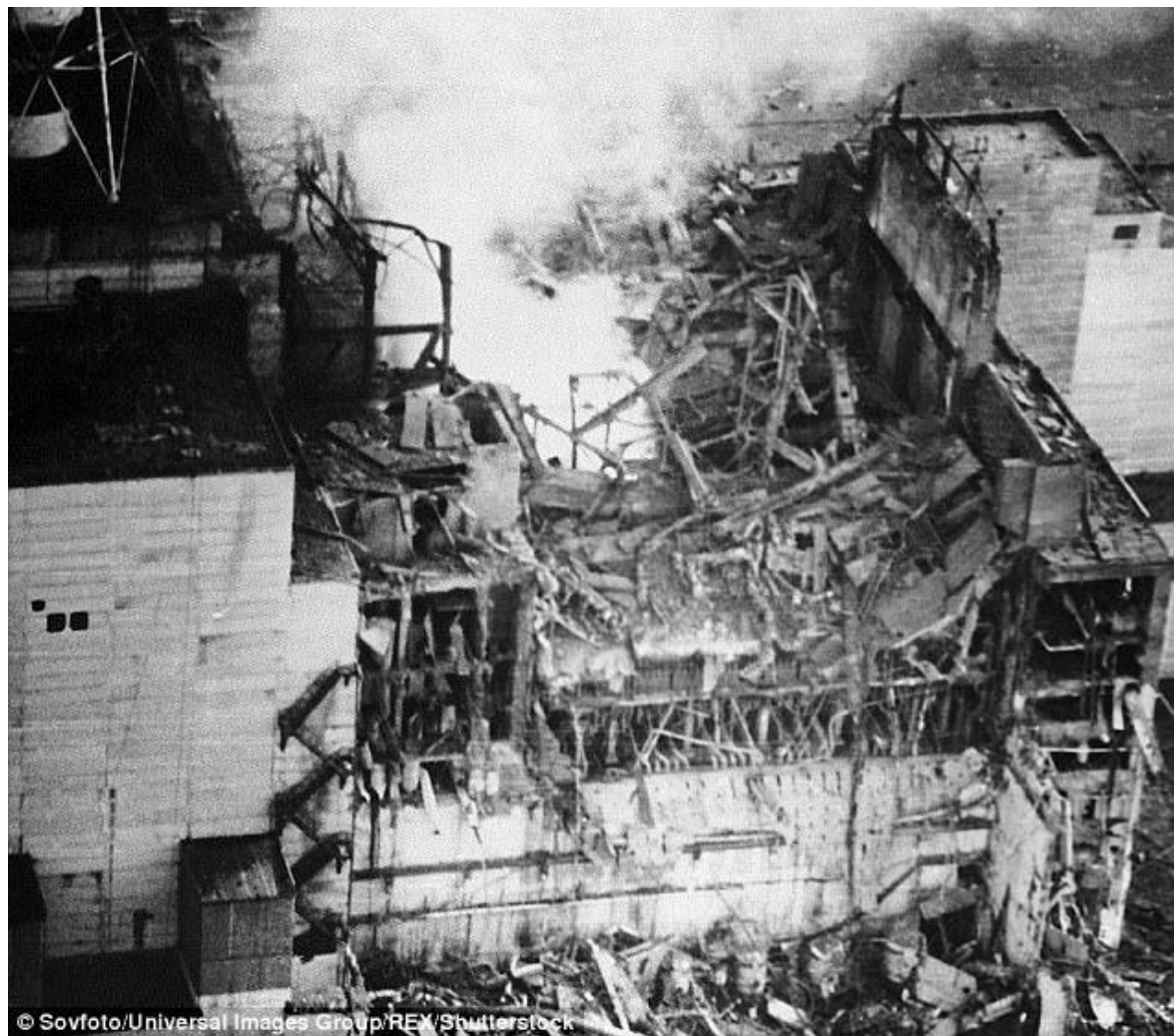
1999







**CHERNOBYL**









**FUKUSHIMA**  
**DAIICHI**











*Fukushima smoldering after the March 2011 earthquake and tsunami*







*Reuters: Kim Kyung-Hoon*

David Brower's Definition of a Nuclear Reactor:

**“A Complex Technological  
Device For Locating Earthquake  
Faults  
In California”**



Diablo Canyon Nuclear Plant Was Designed and Permitted Based on the Assertion of No Active Earthquake Faults within 30 km



Shortly Thereafter, Hosgri Fault Was Discovered, Coming Within 4 km of the Reactors



Subsequently, The San Luis Bay Fault Was Discovered To Be Active Near Diablo

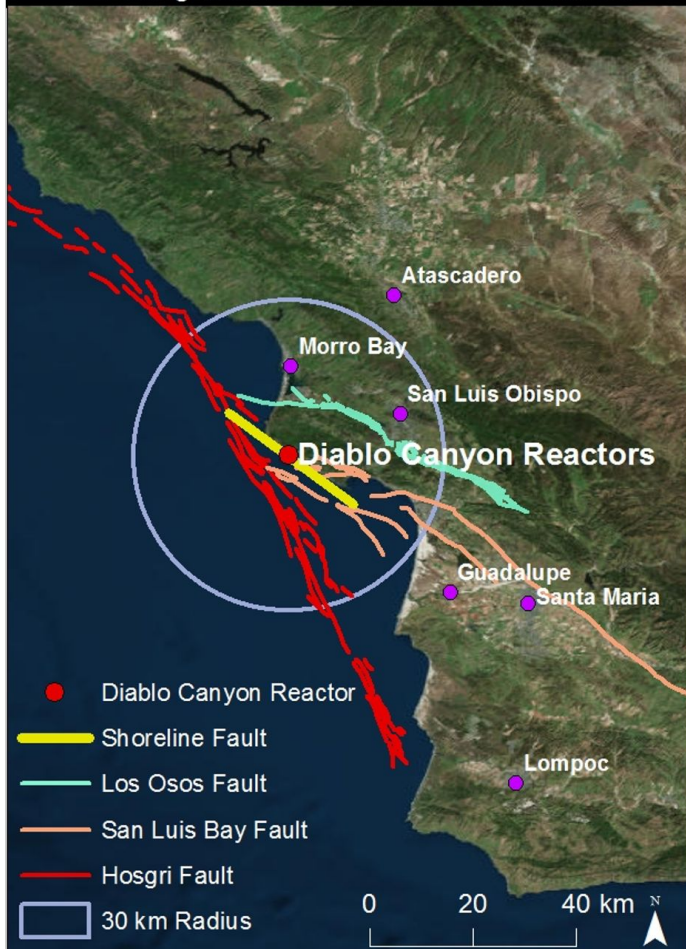


The Los Osos Fault Was Also Found To Be An Active Fault Near The Reactors

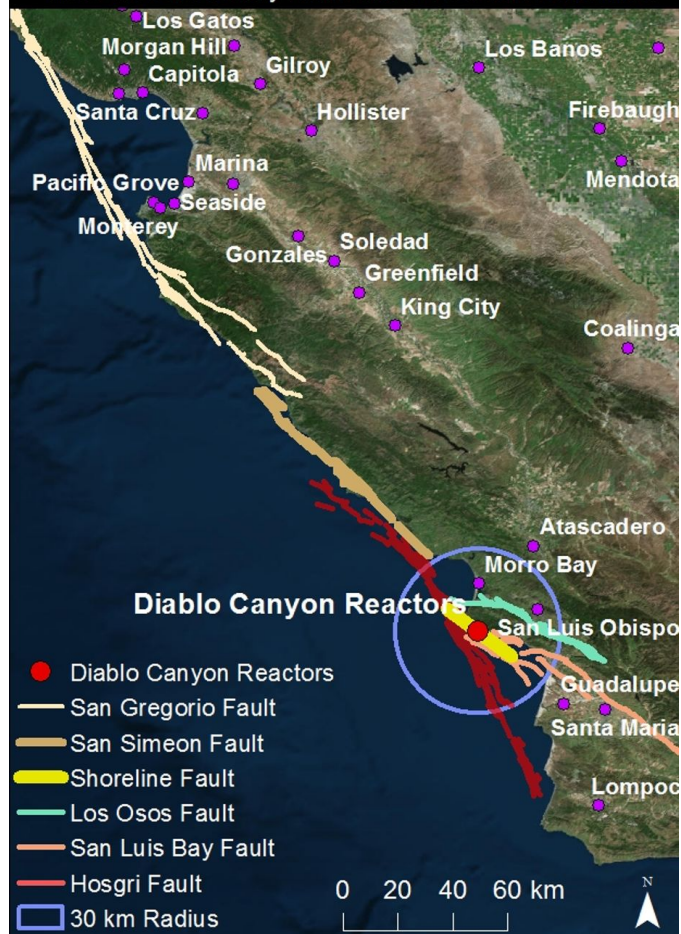




In 2007 The Shoreline Fault Was Discovered,  
Coming Within 600 Meters of The Reactors



Instead of No Active Faults Within 30 km,  
and No Interconnections, It Is Now Known That  
There are Four Nearby Faults and Several Interconnections



The second part of MBCP's mission  
is

## **COMMUNITY CHOICE.**

That means the community decides the  
power content, rather than has it  
imposed on them.

“Good ends...can be achieved only by the employment of the appropriate means. The end cannot justify the means, for the simple and obvious reason that the means employed determine the nature of the ends produced.”

Aldous Huxley  
*Ends and Means*

“This matter returns to the Board following a February 26, 2020 Community Advisory Council meeting and the March 4, 2020 Policy Board meeting, each of which was conducted in compliance with public notice requirements and with the full opportunity for public input.”

June 10 Staff Report

Policy Board of Directors  
Wednesday, March 4, 2020  
10:30 AM

## AGENDA

12. Receive Report and Provide Direction Regarding Proposed  
Allocation of Greenhouse Gas Free Attributes (Action Item)

[Note: Nuclear Not Even Mentioned]



At the March Policy Board meeting, there were several statements made that many MBCP consumers would be very upset with the proposal to accept the nuclear offer from PG&E, and so the Board should approve it before the public learned of the proposal, and then mount a PR campaign to sell the decision after the fact.

Once the decision became public, and substantial public dismay resulted, repeated requests by Mothers for Peace for reconsideration to be placed on the agenda of the CAC and Policy Board received no response. They had to make the requests again and again. Their requests for written explanation of the changing staff cost estimates have still not been met.

This is “no way to run a railroad.” Nor for an entity that was supposed to be an alternative to PG&E, and based on community choice.

This needs to be fixed, by **reversing the decision and taking time for consultation with stakeholders and attempting to reach an honorable consensus consistent with MBCP’s mission.**

# **CCA'S THAT HAVE REJECTED THE NUCLEAR OFFER:**

Peninsula Clean Energy

Marin Clean Energy

East Bay Community Energy

Sonoma Clean Power

Clean Power SF

Valley Clean Energy

Redwood Coast Energy Authority

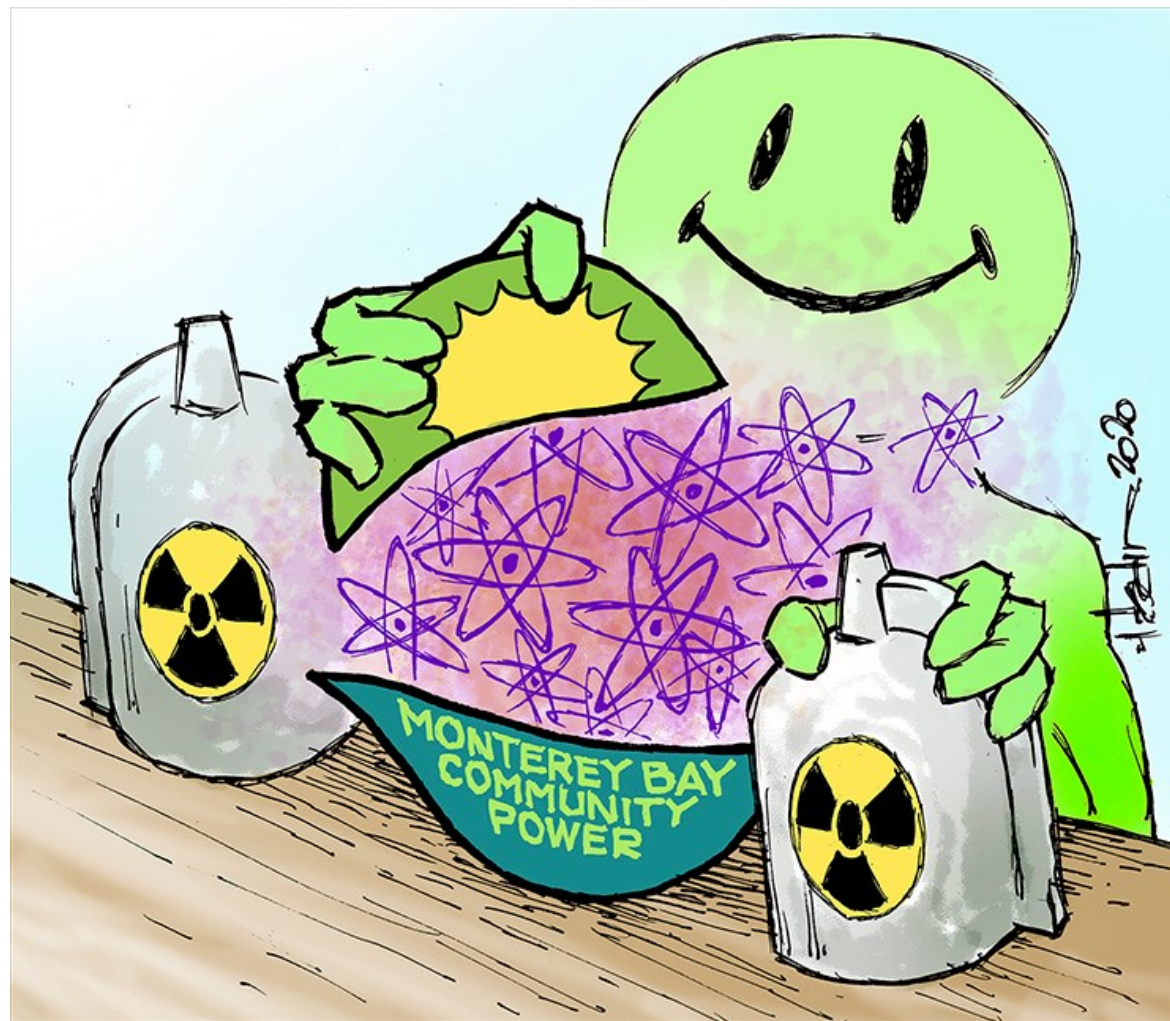
Agency*	Did the CCA take the Nuclear?
CCA - CleanPowerSF	NO
CCA - East Bay Community Energy	NO
CCA - Marin Clean Energy	NO
CCA - Peninsula Clean Energy Authority	NO
CCA - Redwood Coast Energy Authority	NO
CCA - Sonoma Clean Power	NO
CCA - Valley Clean Energy Alliance	NO
CCA - San José Clean Energy	Yes
CCA - Silicon Valley Clean Energy	Yes
CCA - Pioneer Community Energy	Yes

\*No Information available regarding King City Community Power



There is a substantial reputational cost to MBCP/CCCE if the nuclear offer is accepted under these circumstances. The “good will” asset could be significantly hit.

Consumers, if they feel MBCP/CCCE is little different than PG&E, might opt out. Localities that are considering joining MBCP/CCCE could choose not to; localities that joined based on the representation that it doesn't take nuclear might reconsider.





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The “soul” of MBCP/CCCE is  
**CLEAN POWER, COMMUNITY  
CHOICE.**

Do not sell that soul. 50 cents a  
month is not worth it.

# 20%

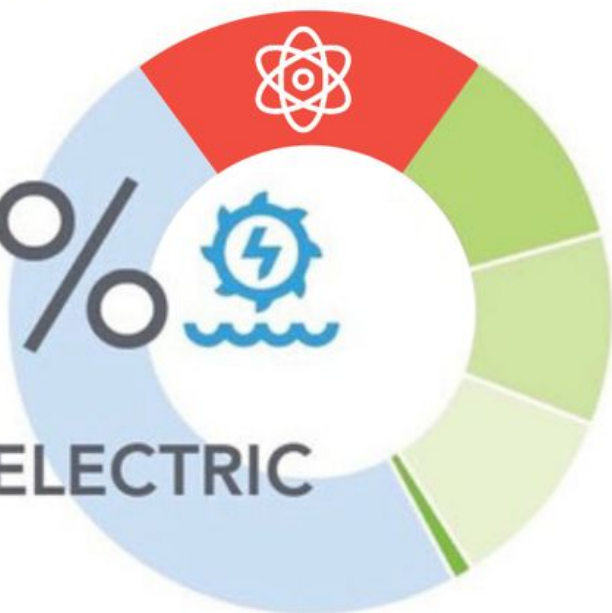
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