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CALIFORNIA ENERGY COMMISSION DOCKET UNIT
RE: DOCKET NO. 07-AB-1632
1516 - 9th Street, MS4
Sacramento, CA 95814-5512

Re: Commission Workshop on AB 1632 Nuclear Power Plant Assessment

Dear Commission:

I am an attorney at law practicing in Nevada City, California. From 1983 to the present I have regularly participated as a litigating intervenor at the California Public Utilities Commission ("CPUC") in hearings on the cost of nuclear power plant decommissioning. After reviewing the Draft Study Plan I have the following comments I wish the Commission to consider.

1.

THE COST OF DECOMMISSIONING WASTE FROM CALIFORNIA'S NUCLEAR POWER PLANTS MUST BE FULLY ADDRESSED IN THE STUDY.

California Public Resources Code 25303(c) requires that:

"In the absence of a long-term nuclear waste storage facility, the commission shall assess the potential state and local costs and impacts associated with accumulating waste at California's nuclear power plants."

To comply with 25303(c) the Commission issued Request for Proposals No. 150-07-101. Task 5.1-5.2 of the RFP stated that the Contractor shall perform the following tasks:

"Task 5.1. Quantify and describe the amounts of radioactive waste generated at each plant over the plant's operating license period, including decommissioning waste, low-level waste (LLW) and spent fuel (SNF), and describe the characteristics of these types of waste;

Task 5.2. Assess plans for and costs of waste storage, repackaging, transportation and disposal (low-level

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radioactive wastes, spent nuclear fuel, decommissioning wastes);"

No where in the Draft Study Plan ("Plan") is the cost of Decommissioning addressed or quantification studies mentioned. Indeed, the word Decommissioning does not appear anywhere in the 17 page "Plan". This issue should be addressed in depth in the assessment as required by law.

2.

THE COST OF DECOMMISSIONING, AND IN PARTICULAR, LLRW WASTE DISPOSAL IS RAPIDLY INCREASING AND THERE WILL SOON BE NO PLACE TO DISPOSE OF B, C, AND GTC WASTE.

California is quickly approaching a crossroad regarding the issue of whether to support or oppose the proposed re-licensing for an additional twenty years of the ageing nuclear power plants in our state. The decision to re-license California's large, ageing nuclear power plants will to some degree foreclose developing and relying on other power producing technologies for two decades in Califoria. It is therefore imperative that the costs and risks of operating California's nuclear power plants be thoroughly assessed.

One of the costs of nuclear power operation that has not received sufficient treatment in the Plan prepared by MRW & Associates ("Draft Report") is the cost of decommissioning California's nuclear plants. Originally when California's nuclear plants were being designed and built, little thought was given to this cost. For example, the 65 megawatt Humboldt Bay plant was completed in 1963. PG&E originally set aside only $577,000.00 to decommission Humboldt Bay Nuclear Power Plant. (19 CPUC 2d 359, 361.) The plant was later closed in 1976, 17 years early, due to seismic design concerns. Belatedly, the cost of decommissioning was re-evaluated.

Beginning in 1978, the cost of decommissioning the Humboldt plant was calculated at $30,000,000.00. (19 CPUC 2d 359, 362.) This figure steadily rose over the years until it reached the figure of $350,000,000.00. (See Appendix A, Humboldt Bay's Historical Estimates of Decommissioning.) In the last Triennial Cost Proceeding this figure climbed to $370,000,000.00. Thus, in 43 years the cost of decommissioning Humboldt Bay rose

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approximately 700 fold.

California's other nuclear power plants have not fared much better. Diablo Canyon Units 1 and 2 were originally estimated to cost a combined $177,000,000.00 to decommission the two units. That cost has swelled to $1.6 billion. The decommissioning of San Onofre Nuclear Generating Station ("Songs") Units 2 and 3 (units similar in size to Diablo Canyon) are currently estimated to cost $3.1 billion. (See Appendix B for comparison of Costs of Decommissioning Nuclear Power Plants.)

The principal factor that has been driving the cost of decommissioning ever higher has been the cost of disposing of Low Level Radioactive Waste. ("LLRW") The history of LLRW disposal is one of ever escalating cost. Between 1979 and 2004 the average disposal cost of LLRW escalated from $1 cu/ft to more than $400 cu/ft. (Government Accounting Office 2004 Study, pp. 17-18.)[1] The GAO report forecast that the average cost of LLRW would exceed "well over $1000 cu/ft in the future". (Id., p. 18.)

The GAO predictions are realistic based on current LLRW disposal cost experience in California. In the last Triennial Decommissioning Cost Proceeding at the CPUC, PG&E told the Commission that it was currently being charged $452.00 cu/ft to dispose of Class A waste at the Barnwell South Carolina LLRW facility. PG&E also confirmed that the cost of burial of B, C and greater that C LLRW were currently $1,626 cu/ft, $5,311 cu/ft, and $21,818 cu/ft, respectively for Diablo Canyon. The cost of disposal of A, B, C and greater than C LLRW generated at Humboldt Bay was currently $248 cu/ft, $644 cu/ft, $2,456 cu/ft, and $21,470 cu/ft respectively. When PG&E's actual LLRW disposal numbers are averaged the cost of LLRW disposal is at least $400 cu/ft as estimated by the GAO study.

Historically the cost of LLRW disposal has been escalating at 10% to 20% annually. (CPUC Mimeo decision 00-02-046, pp. 378-379.)

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[1] This study and other documents referred to will be provided to the Commission by December 21, 2007.

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Greatly complicating the issue of LLRW disposal cost escalation is the fact that in July 2008 the Barnwell, South Carolina LLRW facility will stop taking any LLRW from all California utilities. This will result in there being no facility in which to bury B, C, and greater than C, waste for California utilities. After July 2008 the only place for California utilities to dispose of Class A waste will be Envirocare (now Energy Solutions) in Utah. Energy Solutions can not take B, C or greater than C waste.

In the absence of an available facility to dispose of all categories of California's LLRW, California will likely be forced to help pay to build a Southwestern Compact LLRW facility similar to the facility that was attempted to be built at Ward Valley. After such a facility is built, California nuclear power plants would be required by law to send all of their LLRW to that facility.

The cost of disposal of Class A LLRW at a Southwest Compact facility could run as high as $1,500 to $2,500 cu/ft.[2]

Further complicating the matter of LLRW cost increases are the proposals to relicense California's ageing plants. Because California nuclear plants are getting to the end of their service life they have begun to have unexpected replacement needs of major systems such as reactor vessel heads, steam generators and rotors. These systems will eventually require decommissioning (along with the original parts) which cost was not anticipated. Running these ageing plants after relicensing will almost certainly result in significant unplanned additional decommissioning expenses that will likely result in major cost increases in the cost of nuclear power.

With the cost of decommissioning going every higher, at least

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Excess Capacity for the Disposal of Low-Level Radioactive Waste in the United States Means New Compact Sites are Not Needed, F. Gregory Hayden, Ph.D., Nebraska Commissioner, Central Interstate Low-Level Radioactive Waste Compact Commission, December, 1997.

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one California utility[3] has opted for early decommissioning of one of its nuclear plants. In 1999 PG&E agreed to intervenor requests for the early decommissioning of Humboldt Bay Nuclear Power Plant in order to take advantage of current lower prices of disposal of the more than 74,000 cu/ft of LLRW at Humboldt Bay.

In conclusion, history has demonstrated that the cost of decommissioning is being driven steadily, and inexorably, higher by the ever-rising cost of LLRW disposal. The cost of decommissioning California's plants is now expected to equal or exceed the original cost of construction. Early decommissioning of nuclear plants can result in significant cost savings. These factors should all be carefully considered in the Nuclear Power Plant Assessment.

Respectfully Submitted,

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[3] Sacramento Municipal Utility District has also shut down its nuclear plant early in order to decommission the facility.

COMPARISON OF THE COST OF DECOMMISSIONING

PLANT TYPE All PWR except where noted.	YEARS OPERATED	MEGAWATTS	COST OF DECOM. ($ millions)	DECOM COST PER MEGAWATT
Humboldt Bay (BWR)	13	63	350	$5,555,556
San Onofre (SONGS1)	25	450	606	$1,102,444
SONGS 2&3		2,200	3,100	$1,409,091
Connecticut Yankee	28	590	831	$1,400,000
Palo Verde		3,300	2,230	$ 675,000
Maine Yankee	24	860	700	$ 813,953
Diablo Canyon 2		1,100	880	$ 800,000
Diablo Canyon 1		1,100	715	$ 650,000
Rancho Seco	14	913	450	$ 492,881
Trojan	17	1,100	429	$ 390,000