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Public Comment re AES Application to Rebuild Power Plant in Redondo Beach

Additional submitted attachment is included below.

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To: The California Energy Commission (CEC)

Re: AES application to rebuild power plant in Redondo Beach

As a concerned citizen of Redondo Beach and a clinical neuropsychologist, I strongly encourage your commission to demand overwhelming evidence that AES's plan to rebuilt a power plant on the existing beachfront site is absolutely necessary and safe.

Although beach water access for power generation will soon be outlawed and the need for building plants on the waterfront will hence disappear, I can envision a rationale for the continued existence of beachfront power generation in Huntington Beach and El Segundo, since these are both in highly industrial and/or primarily vacant areas. There are no permanent residential structures nearby and certainly no schools downwind. Neither of these statements is remotely true regarding the AES Redondo Beach site. One of the largest high schools in the country sits extremely close to the power plant and thousands of South Bay residents (not just those in Redondo Beach) are within the range of the emission clouds from the power plant stacks.

As a neuropsychologist I have to keep up on the health and brain literature. There is a disturbing trend emerging from multiple researchers studying the impact of air pollution, particularly fine particulates, defined as those less than 2.5 microns in diameter. The impact of these pollutants on the brain development in children is increasingly clear. In addition it appears that such pollutants have a causal role in skyrocketing rates of autistic spectrum disorder in children and dementia in the elderly.

According to AES's own filing dangerous fine particulates will increase dramatically in the new "cleaner" plant, measured in tons per month spewing out of lower smoke stacks so they can get into the lungs of those nearby quicker.

The impact on these fine particulates on brain development in the young, dementia onset in the elderly and autism in the unborn fetus is just now coming to light. A series of recent studies on children have all found a negative impact of air pollution on cognition (thinking ability). These findings are most dramatically associated with particulate pollution, which is expected to increase by a factor of at least 5 according to AES's own filings. Boston University School of Public Health published a report in 2008 that followed children from birth through 10 years of age. They found that children exposed

to greater levels of a certain type of particulate scored significantly worse on tests of memory, as well as both verbal and nonverbal intelligence.

More recently, a study published last year by researchers from Columbia University followed children from birth to age 7 and found that children exposed to higher levels of urban air pollutants known as polycyclic aromatic hydrocarbons while in utero were more likely to experience attention problems and symptoms of anxiety and depression. Similarly a study from the University of Michigan found that children exposed to the highest levels of pollution had the lowest attendance rates and a greater percentage of children who failed to meet state testing standards.

Studies in Mexico City, a notoriously polluted place, have found that the brains of dogs in the city had significantly more signs of brain deterioration (amyloid plaques and neurofibrillary tangles both associated with Alzheimer's disease in humans) compared to dogs outside of the city. MRI scans identified brain changes in children living in Mexico City, as well as lower scores on tests of memory, cognition, and intelligence.

The adverse impact of these pollutants on an individual's health has long been established. Air pollution has been found to contribute to such diseases as cancer, immune disorders, heart disease, and lung disease. For example, a recent article published in the European Heart Journal identified a 20% increase in mortality risk for each additional 10 micrograms per cubic meter of fine particulates in ambient air among heart attack survivors. What is now even more frightening to comprehend is the scope of the impact these pollutants have on the most important organ in the body, i.e., the brain.

So I ask you again, please ensure that the power generated by this power plant in the middle of a densely populated area is absolutely essential for grid reliability before you consider granting them a license to rebuild on this entirely unsuitable location.

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