



## NUKES FACT SHEET

Every nuclear power plant routinely releases radioactive contaminants — gases, liquids and particles — during its daily operation and during refueling. It does not take an accident. Exposure to these releases is dangerous to human health, and especially during childhood and pregnancy.

### THE MOST VULNERABLE

- ☉ Embryos, babies and young children are the most susceptible to damage from radiation.
- ☉ Radiation exposure during pregnancy and childhood can increase the amount of cancer and non-cancer disease during childhood and adulthood.
- ☉ A 2012 analysis of multiple studies in Europe reveals a statistically significant 37% increase in childhood leukemias within 5 km (about 3 miles) of nuclear power plants.
- ☉ Studies show that exposure to man-made, and even to arbitrarily described levels of "background" radiation, can increase childhood cancer and impair early brain development. 3,4,5,6

Women and children are more vulnerable to radiation damage than men. Women are as much as 60% more sensitive to radiation than men. Infants and children are more radiosensitive than adults, with female children at higher risk. Established levels of exposure to radiation, deemed "acceptable" — but not "safe"— average the doses to adults and children, hiding the full impact to more sensitive members of the population. Pregnancy is not given any special protection. Nuclear power reactors routinely release radioactive gases and liquids. Radioactive releases of liquids and gases from commercial nuclear power reactors occur routinely as part of daily operation. It does not take an accident, although releases are far higher, and travel further, during an accident.

The production of electricity by way of nuclear fission is undeniably unhealthy for a number of reasons:

- ☉ The routine release of the long-lived, carcinogenic isotopes Cesium-137 and Strontium-90 into the atmosphere and through effluents;
  - ☉ The possibility of a serious accident on the International Nuclear Emergency Scale (INES-7); and
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- ☢ The long-term management problems posed by the used fuel elements, especially with regard to the man-made isotope Plutonium-239.
- ☢ The topography of the Cape St Francis -- surrounded by two oceans and steep mountain ranges makes emergency evacuation impossible.
- ☢ The economic justification for such an expensive source of electricity (need & desirability) has not been established in comparison with other sources.
- ☢ Given the nation-wide resistance to a pro-nuclear energy policy, the determination to pursue this technology seems to contradict our constitutional rights with regards to participatory decision-making.

#### WHAT THE PUBLIC CAN DO

ECEN is proposing the following actions to help address the risks of radioactive releases from nuclear power reactors:

- ☢ Work to encourage the passage of federal and state legislation that will require constant monitoring and reporting of every reactor's radioactive releases to the air and water, and onto land.
- ☢ Urge our government officials to demand the shutdown of the remaining SA nuclear power plants. ☢ Help encourage the government to acknowledge the hazards of the radioactivity released routinely to the public -- into water (lakes, rivers, oceans) and into air.
- ☢ We all need to work to eliminate the radioactive contaminants released from nuclear reactors. But obviously the only safe path is to have **NO** nuclear power.

Renewable energy can create more SA jobs than fossil fuels and nuclear power.

- In the South Africa alone, 1.3 million "direct impact" jobs could be created by a ten year investment of \$150 billion in renewable energy sectors (electricity and motor fuel). Direct impact jobs result from an increase in demand for the industry in question.
- They do not include tangential jobs such as retail stores or other support work.
- A proposed "new" nuclear reactor would employ at most 700 permanent workers and 4000 workers on a temporary basis during construction.

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