Japan’s second largest power company is to close all 11 of its nuclear reactors to carry out urgent safety checks after an accident at one of its plants on Monday in which four workers died and seven others were injured.

Kansai Electric Power said the closures would not affect power supplies, but admitted it would have to restart two ageing oil-fired plants to make up the expected shortfall in electricity generation.

The announcement came four days after four men burned to death when scalding non-radioactive steam escaped from a ruptured turbine pipe at a reactor in Mihama, about 200 miles west of Tokyo.

The company later admitted that the burst pipe had not been properly inspected for 28 years, even though a subcontractor warned last year that it should be checked urgently.

It ruptured as the workers were preparing the plant for an inspection scheduled to begin this weekend.

The company’s president, Yosaku Fuji, denied local media reports that he would resign to take responsibility for the accident.

In terms of fatalities, the accident was the worst yet at a Japanese nuclear power plant.

In September 1999 two poorly-trained workers died after accidentally setting off an uncontrolled chain reaction at a uranium processing plant near Tokyo.

The inspections could cost Kansai Electric as much as £50m, depending on how long they last.

"Normally it would take about six weeks to carry out the checks," said a company spokesman.

Japan’s eight other electric power companies said they would not follow Kansai Electric's lead, but they may have to close plants if they are found to have missed safety checks.

The nuclear watchdog has given them until next Wednesday to report back.

Kansai Electric says it has enough oil in stock to restart two ageing thermal reactors.

Tokyo Electric Power re-started seven thermal plants after it was forced to close all 17 of its nuclear reactors last year. The company, Japan’s largest power producer, admitted it had tried to conceal reports of cracks for 15 years.

The government’s enthusiasm for nuclear power has not been dented, despite growing safety fears.

It plans to add several new reactors to the current 52, and to increase the nuclear sector's share of energy output to around 40% by the end of the decade.