

NUCLEAR MITIGATION OF CLIMATE CHANGE

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This presentation is available at:

<https://www.xylenepower.com/Nuclear%20Mitigation%20of%20Climate%20Change.htm>

This presentation quantifies the measures necessary to mitigate CO2 driven climate change.

In this context "to mitigate" means to prevent the climate becoming more adverse, not to make the climate better.

Past and present political leaders and fossil fuel promoters have already permanently squandered our former good climate. The climate will continue becoming more adverse until after world fossil CO2 emissions drop at least 10 fold.

INTRODUCTION

SYMPTOMS OF CLIMATE CHANGE:

- extreme high temperatures
- prolonged droughts
- uncontrolled wild fires
- insect infestations
- winter road failure
- permafrost melting
- loss of seasonal snow packs
- lack of irrigation water
- flash floods
- violent storms
- sea level rise
- fish stock collapse
- high wet bulb temperature

UNCONTROLLED HUMAN MIGRATION

In many countries climate change is more consequential than in Canada.

The result will soon be uncontrolled human migration into Canada. Each new migrant will stress existing accommodation, infrastructure and public services.

PROCRASTINATION:

Failure to promptly mitigate climate change will drive into extinction large land animals (including humans) and many marine species.

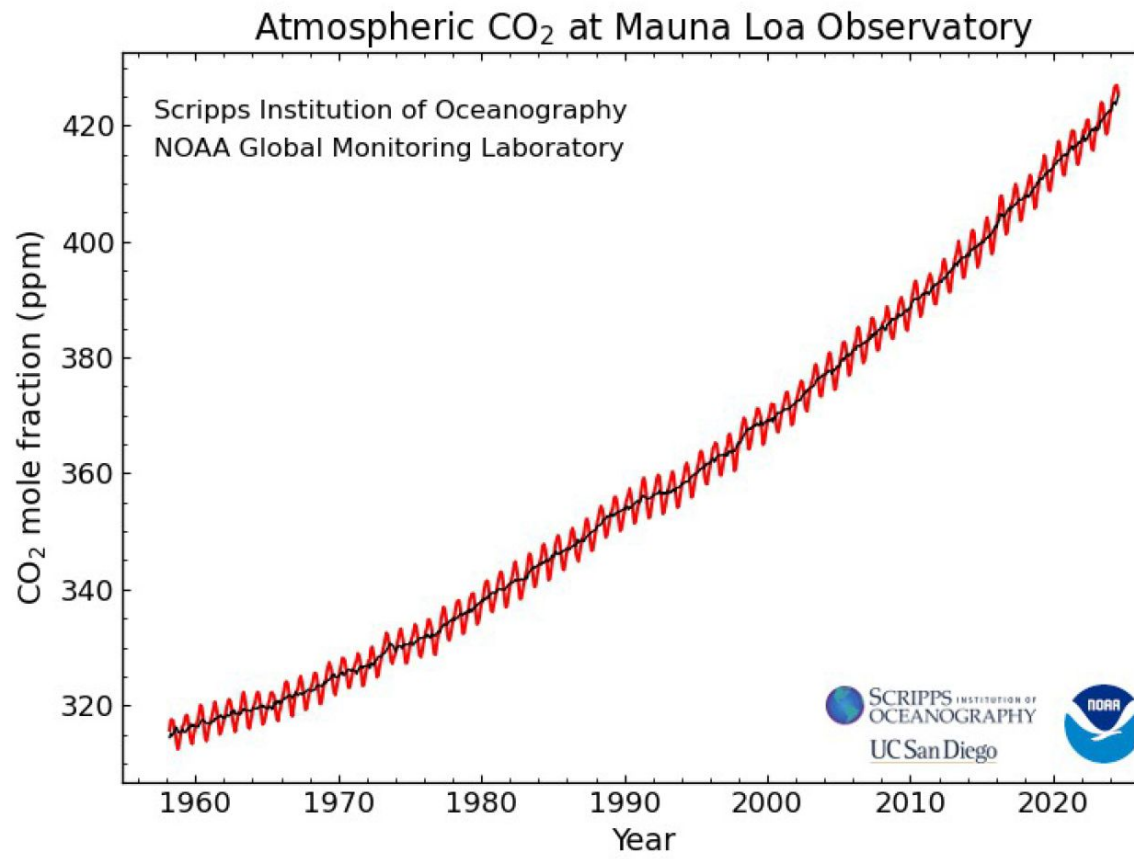


Figure 1

Figure 2 - EARTH AS VIEWED FROM OUTER SPACE , Dec. 1972



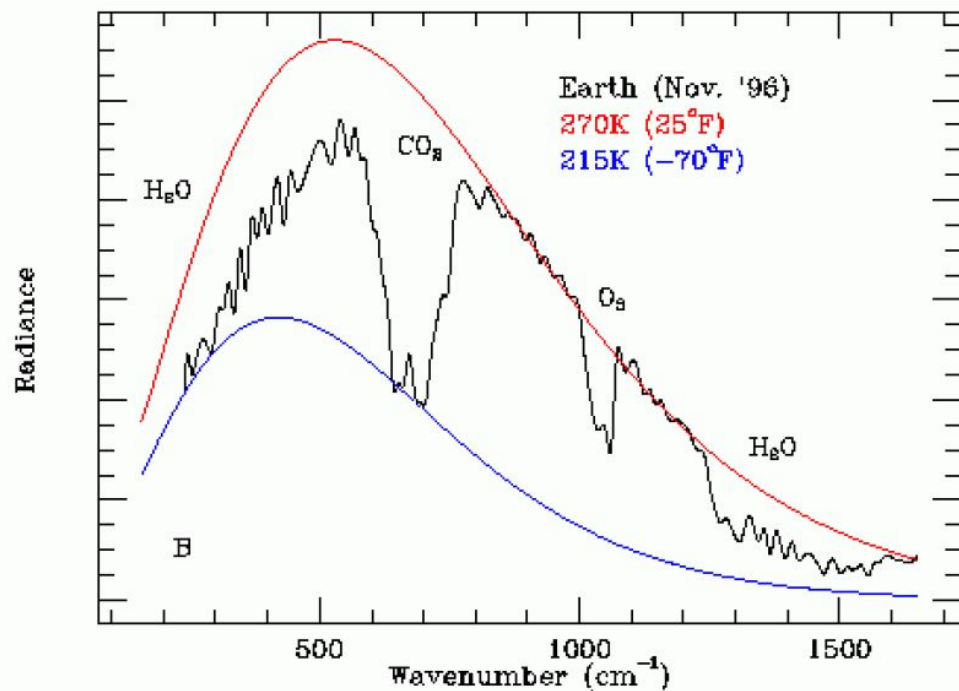


Figure 3

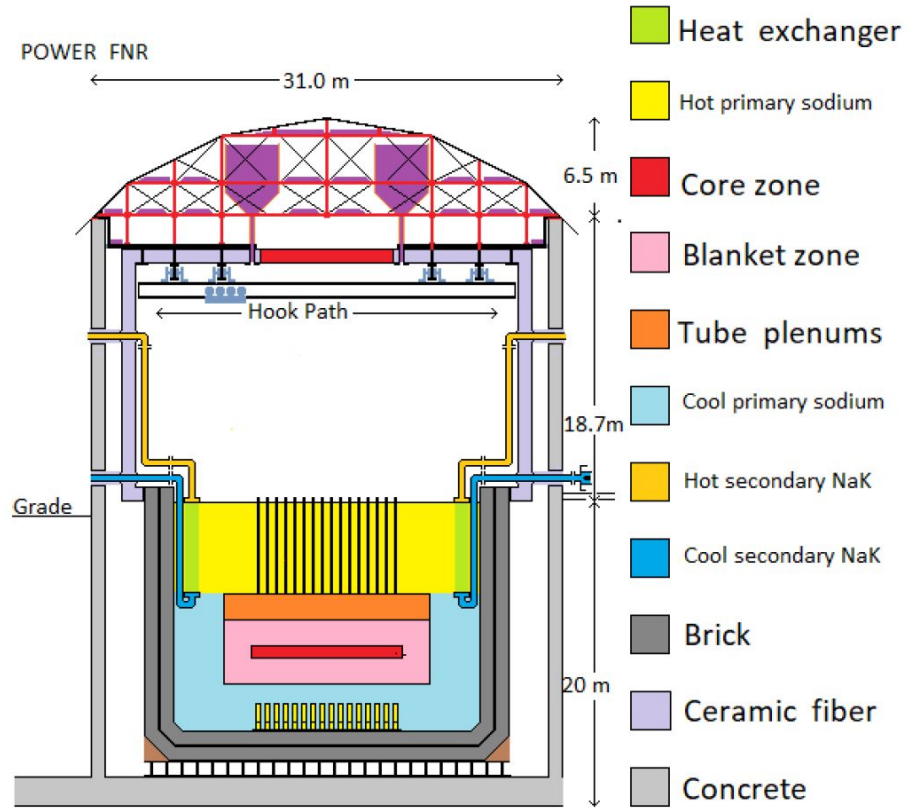


Figure 4 - 1 GWt FNR Side Elevation

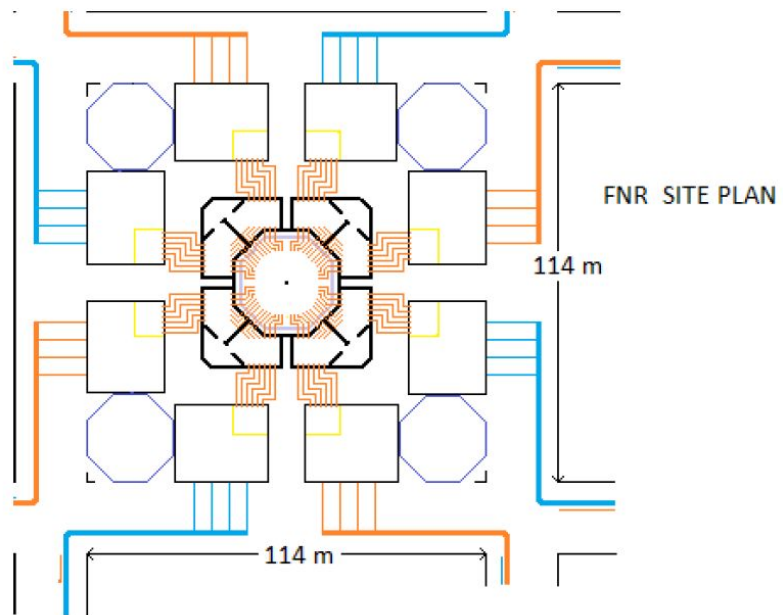


Figure 5- FNR Site Plan

CONCLUSIONS I

The time available for implementation of climate change mitigation measures is only a few decades. In addition to the cost of nuclear power capacity expansion the cost of managing climate migrants must also be met.

Present government led climate change mitigation policies are not founded in physics and are ineffective.

Addressing climate change requires engineering leadership:

- a) Climate change is a more serious threat to public safety than hypothetical nuclear accidents.
- b) Investment in new fossil fuel infrastructure must stop;
- c) Fossil fuel suppliers must be bankrupted irrespective of pension plan consequences;
- d) Corrupt and/or technically incompetent government and utility decision makers must be terminated;
- e) Governments must be guided by independent professional engineers, not public opinion or ALARA like regulations.

CONCLUSIONS II

There must be:

- f) Ongoing resource allocation sufficient for timely mitigation of climate change;
- g) Electricity retail billing that reflects dependable capacity costs;
- h) Electricity generator financial compensation that reflects both: dependable capacity and energy provided;
- i) Effective use of surplus clean interruptible power for fossil fuel displacement;
- j) Reprocessing of used CANDU (thermal reactor) fuel to make Fast Neutron Reactor (FNR) fuel;
- k) Urban siting and deployment of low pressure FNRs;
- l) Urban district heating and related planning, building code and legislative changes;
- m) Reprocessing of used FNR fuel;
- n) Insolvency protection for nuclear assets.

The choice is binary. Either promptly accept all of these conditions or accept near term thermal extinction.

Questions?