

# Thermal channel implementation at FISSIONIST

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2nd Cycle Integrated Project in Engineering Physics

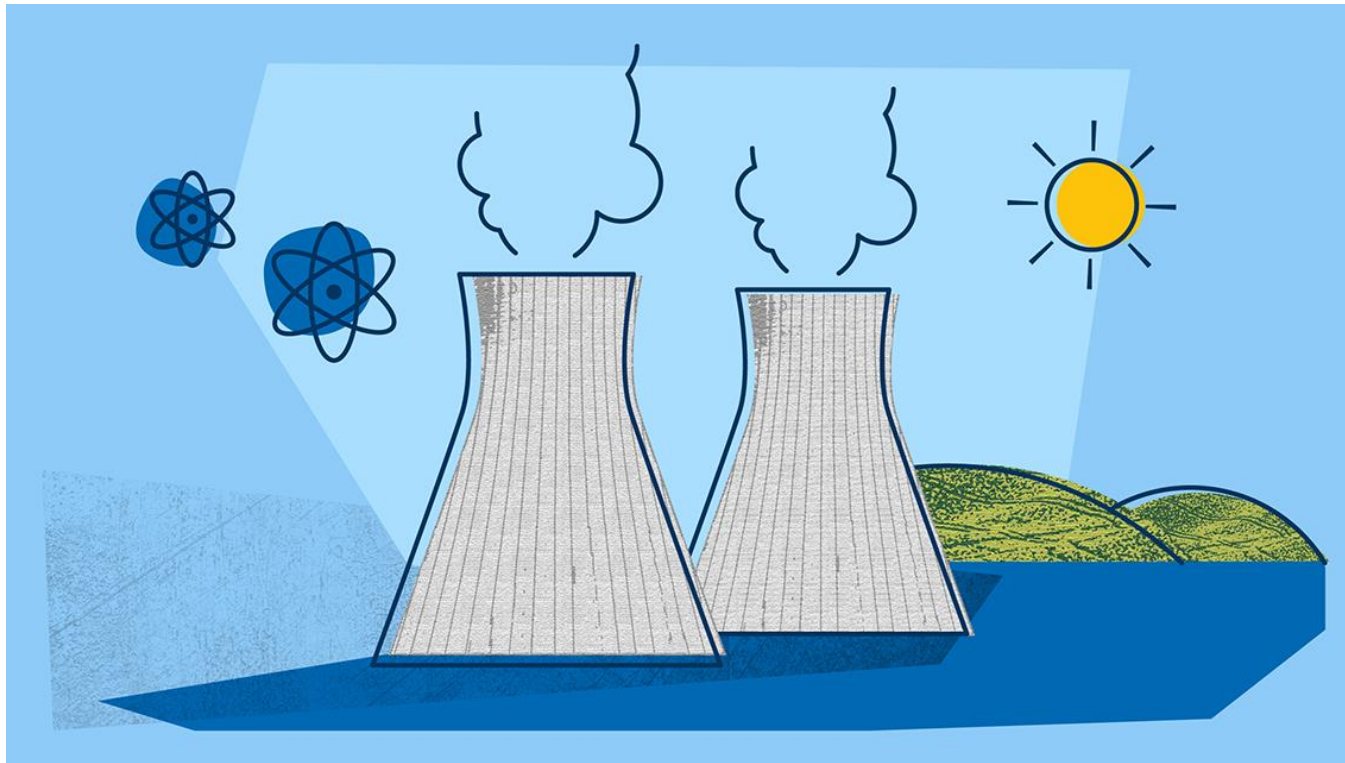
**MEFT**

Boosting the Future



# Nuclear Fission Energy

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- ❖ Energy diversification
- ❖ Stable supply (baseline)
- ❖ Safe and clean
  
- ❖ High costs
- ❖ Specialized workforce

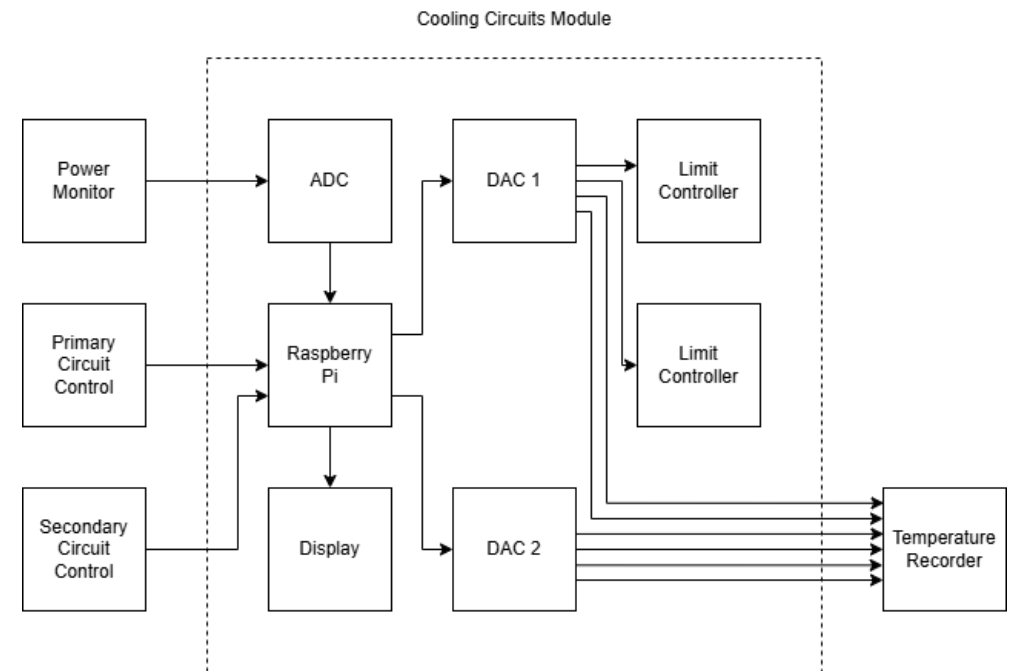
# FISSIONIST

- ❖ Simulates a research reactor (low power)
- ❖ Realistic, immersive and safe
- ❖ Reactor without neutrons



# Cooling Circuits Module

- ❖ Input of pump state and reactor power
- ❖ Primary and secondary circuit flow simulation
- ❖ Temperature simulation at critical points
- ❖ Interface with SCRAM
- ❖ Temperature in the kinetic equations



# References

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- [5] S. León et al. World Nuclear Performance Report 2024. 2024.