



OKLO INC

# **Non-Applicabilities & Requested Exemptions for the Aurora-INL**



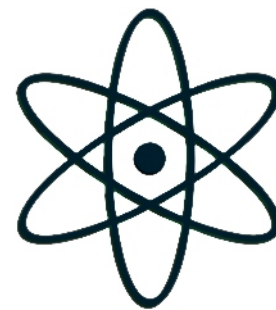
# About us

Raised the **first-ever**, modern, venture-led, series A for a fission company

Granted an INL **site use permit** from Department of Energy

Selected to demonstrate **recycle of spent fuel** at Idaho National Laboratory

Became the first advanced fission company in the country to have a license application **accepted** by the U.S. Nuclear Regulatory Commission



Oklo develops clean energy generation sources with advanced fission to mitigate the social and environmental impacts of pollution as well as energy poverty.







# Aurora Powerhouse



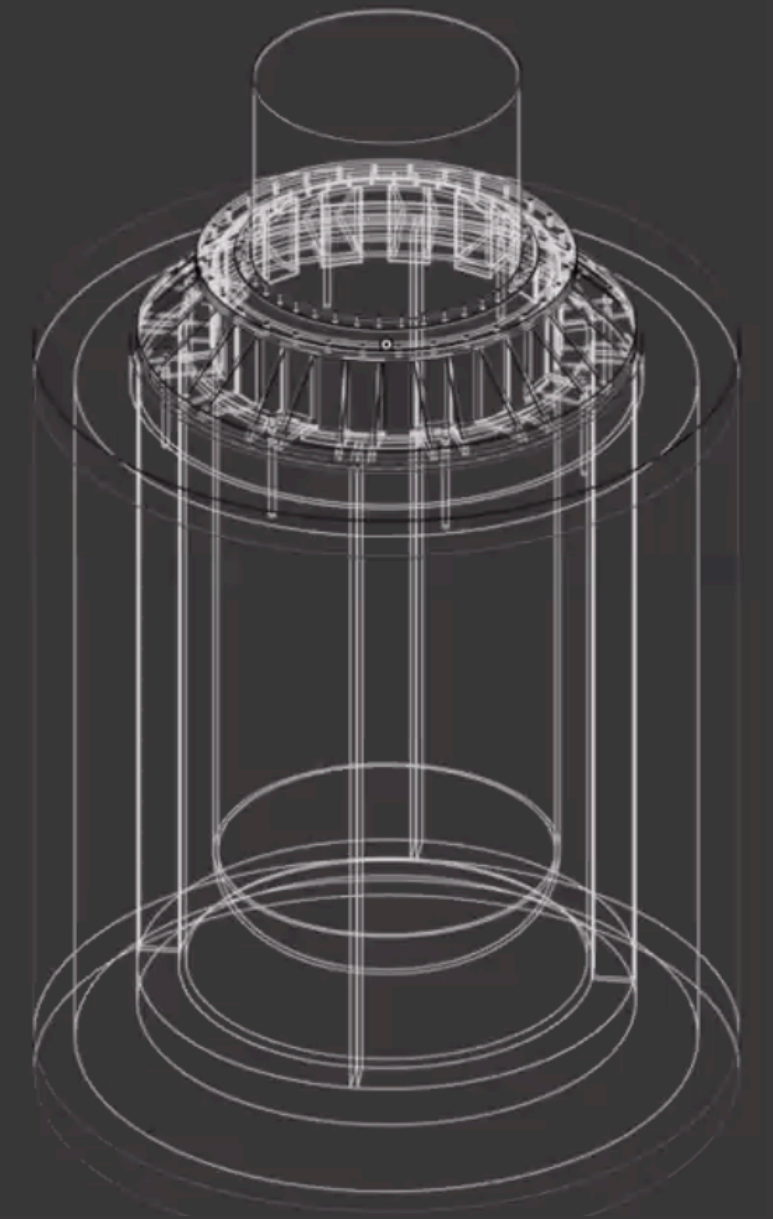
# The Aurora

1-2 MWe output depending on use case

20 years between refueling

Advanced fission battery with solar

Can utilize used material (“waste”)

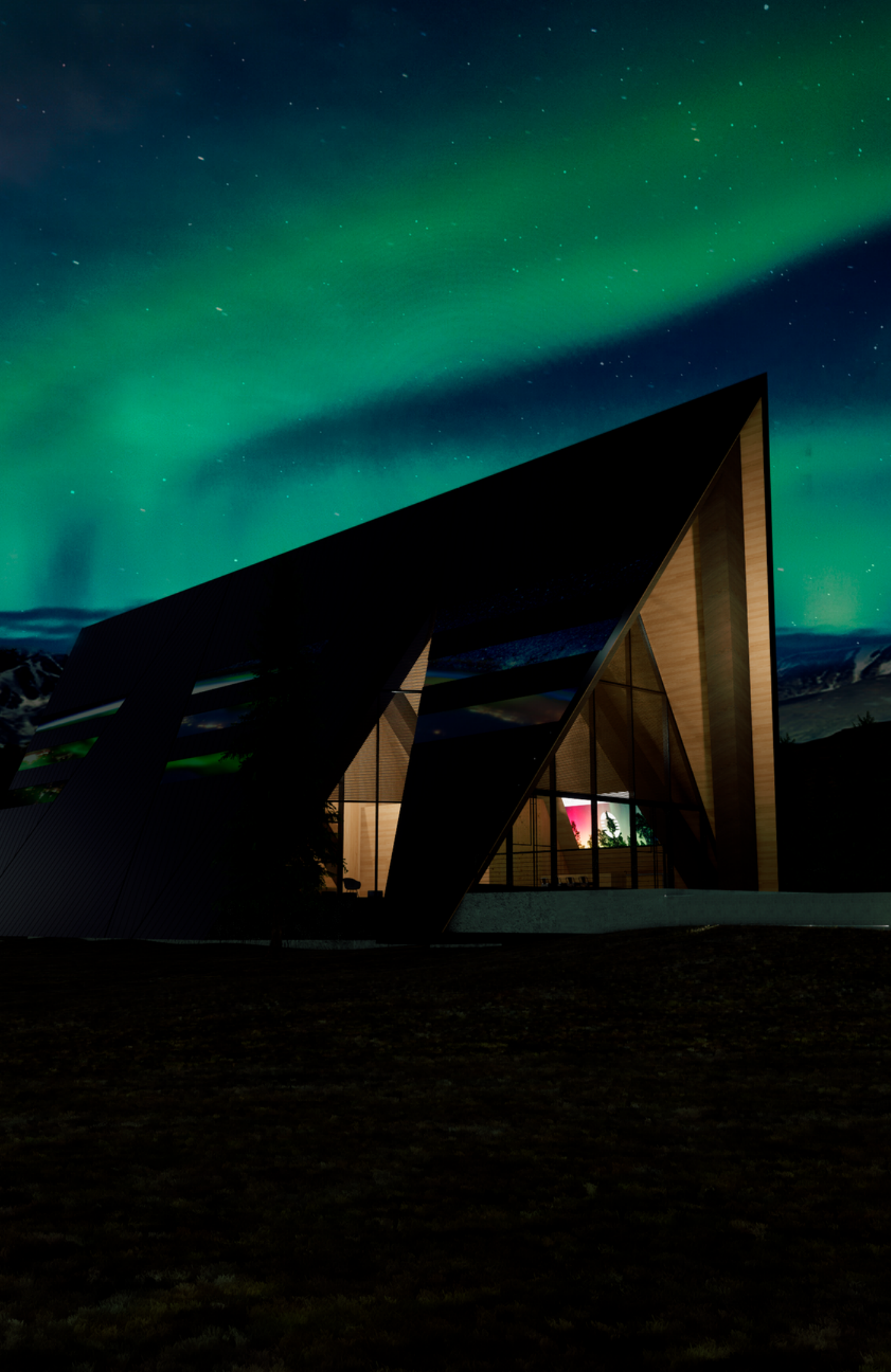




	Current large light water reactors	Aurora
Power output (MWth)	1600-4400	< 5
Refueling cycle (years)	1.5-2	None
Radionuclide inventory (metric tons)	100-150	< 5
System pressure (atm)	150	Near atmospheric
Hydrogen explosion risk	Yes	No
Cooling	Loop with low thermal inertia	Passive heat pipes
Electric power dependence	Relies on offsite power or emergency diesel generation	No safety-related electric power dependence
Negative reactivity coefficient	Yes	Yes







# Methodology





# Background

Atomic Energy Act → NRC regulations

Regulations generally have two characteristics:

1. They contain assumptions about the facility
2. They evoke that adequate protection is assured, in part, through compliance





# Background

# Non-Applicability

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# Background

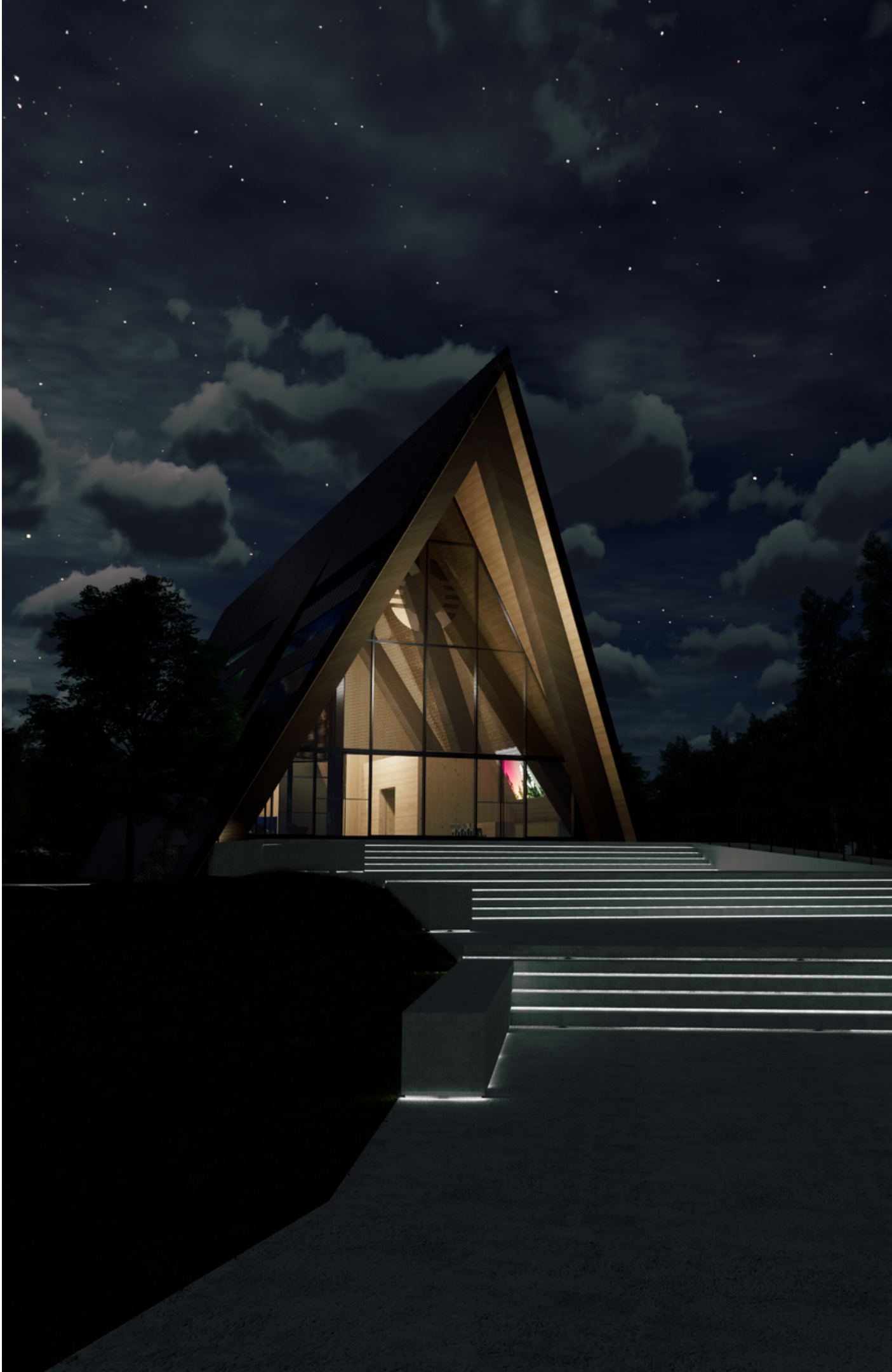
## Exemption

Atomic Energy Act → NRC regulations

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2. They evoke that adequate protection is assured, in part, through compliance





# Process





Regulations



Design  
assumption

Regulations





Design  
assumption

Regulations



Do not apply



Non-applicability



Design  
assumption

Assurance of  
safety

Documentation  
method

Apply

Compliance not needed

Exemption

Regulations





Design  
assumption

Assurance of  
safety

Documentation  
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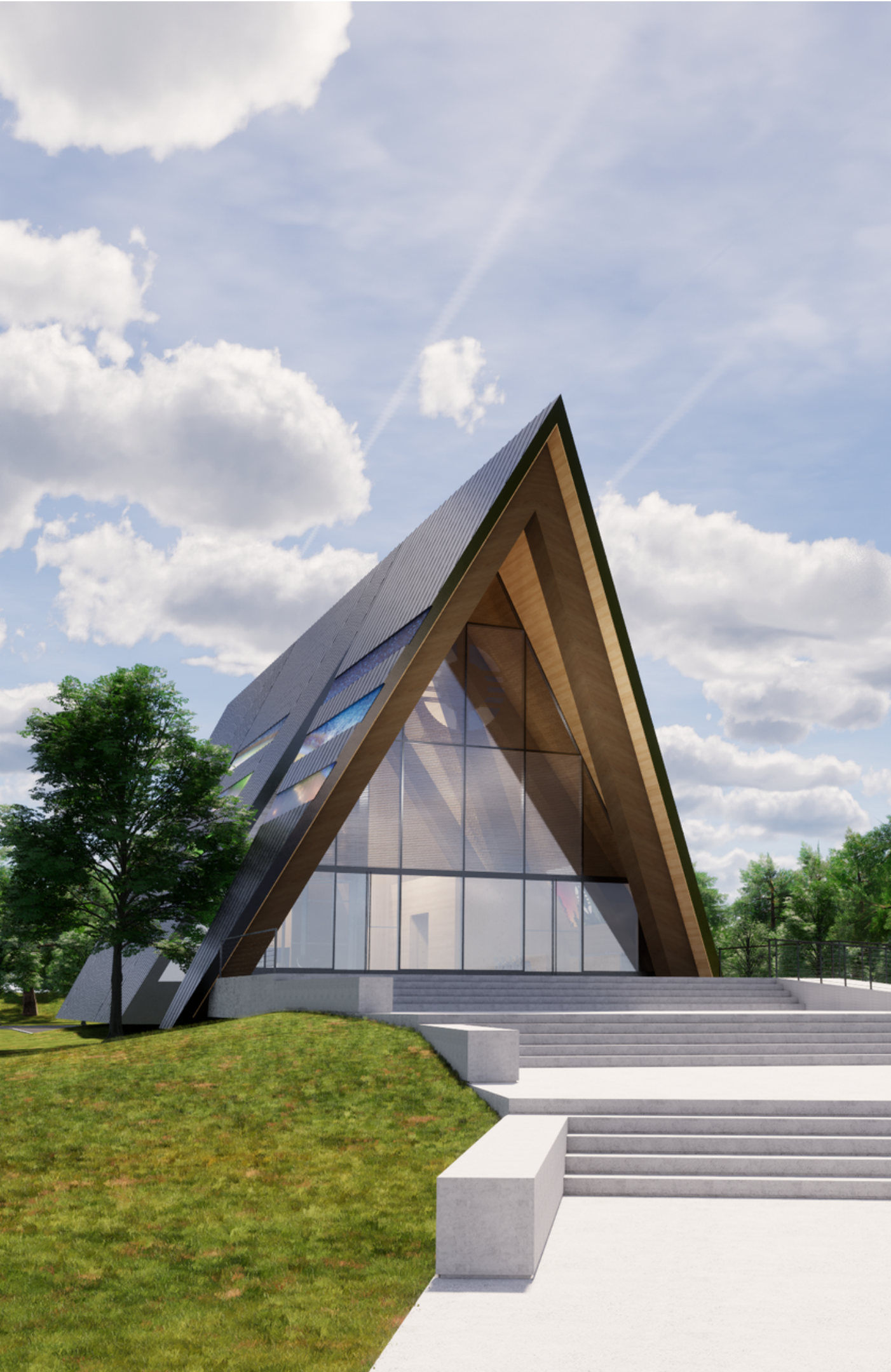
Compliance needed

COLA

Apply

Regulations





# Examples





# Examples: generic to non-LWRs

GDC

ECCS & RCS vents

PTS

SBO

Codes & standards

Primary containment  
leakage rate testing

Reactor vessel material  
surveillance

Effluent monitoring

TMI requirements

Severe accidents

SRP evaluation

ATWS



# Examples: generic to microreactors

Maintenance Rule

Emergency  
preparedness

Physical security

Aircraft impact

Loss of large area



# Examples: specific to Aurora

Combustible gas control

Environmental  
qualification

10 CFR 50.69

Multi-unit considerations







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# Thank you