ULTRA SAFE NUCLEAR


ULTRA SAFE NUCLEAR
MMR1
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USNC IS A GLOBAL TEAM

ULTRA SAFE NUCLEAR

Reliable Energy Anywhere

March 8, 2022

About Ultra Safe Nuclear Corporation

Dr. Francesco Venneri

- Ph.D. in Nuclear Engineering, U. of Illinois
- Los Alamos National Laboratory, NM
- Chief Scientist, General Atomics Energy Group

- Advanced energy company | 180+ employees | Headquartered in Seattle

- Designs, licenses, manufactures, and develops clean energy technologies specifically for remote applications that are difficult to support with conventional baseload or renewable power

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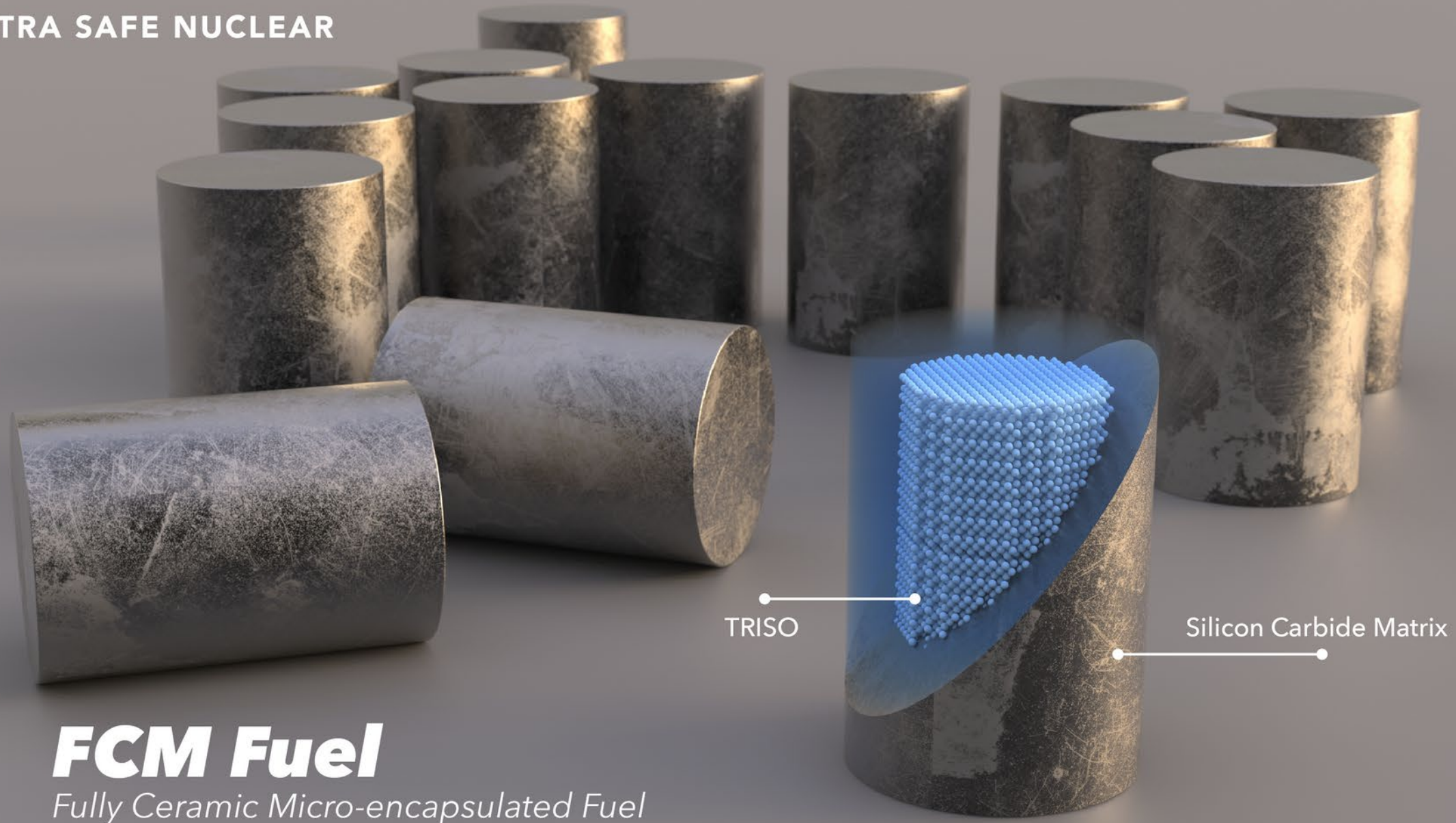
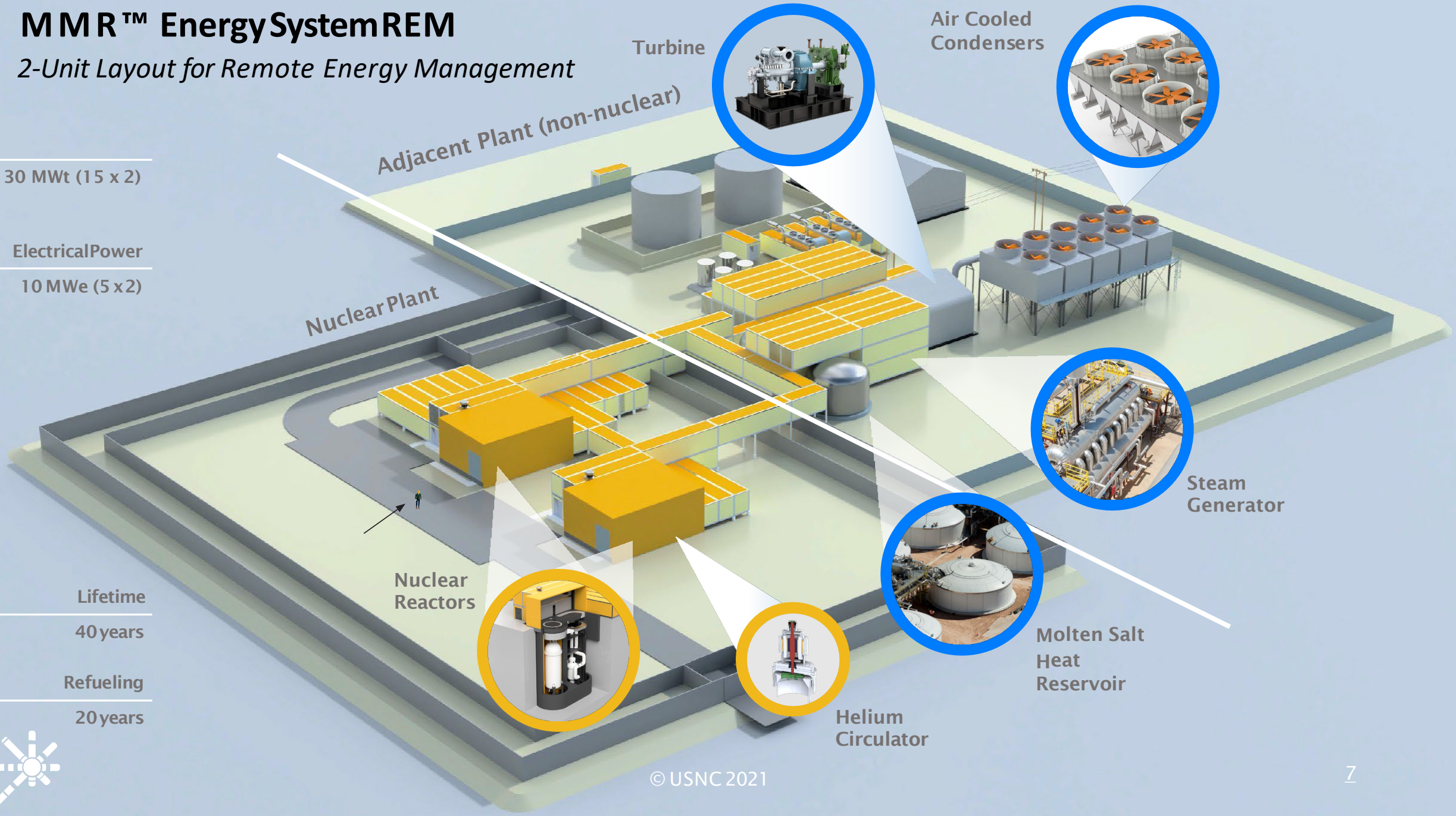


FCM Fuel

Fully Ceramic Micro-encapsulated Fuel

MMR™ Energy System REM

2-Unit Layout for Remote Energy Management



30 MWt (15 x 2)

Electrical Power

10 MWe (5 x 2)

Lifetime

40 years

Refueling

20 years

Projects in Development

Why the MMR is Right for Alaska

- Remote power
- Stable cost
- Industrial applications
- Environmental advantage
- Transportability
- Plug & Go
- Scalable
- Increased safety

CVEA/USNC Joint Feasibility Study

- Is there anything that would prevent siting an MMR here?
- What are the preferred sites and their characteristics?
- What are the cost parameters and decision points?
- What are the benefits, concerns, and issues for the community?
- What operating specifics might apply in locating an MMR here?

CVEA and USNC are contracting a local engineering firm for the study that knows the area utilities, power grid, customers and community factors well

The feasibility study is expected to take 4 months and be completed by end of summer 2022

If selected, Valdez would be the Serial 003 MMR project (after Chalk River, UIUC)

Stakeholder Engagement

Essential from the Outset

What is engagement?

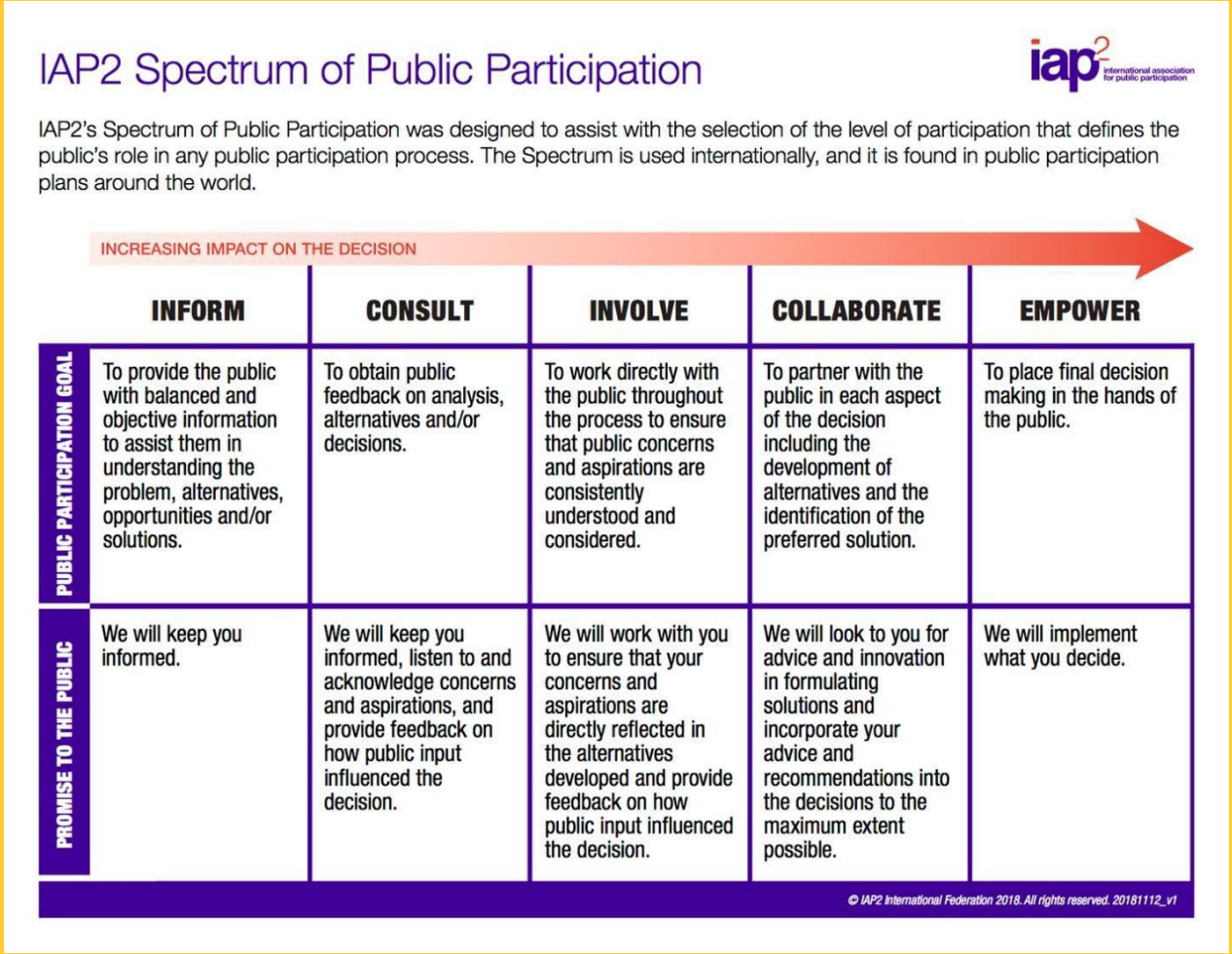
Early: Stakeholder Engagement is a core competency for USNC

Identification of range of stakeholders

Outreach- contact, establish best means of connection

Meet, listen, 2-way dialogue

Ability to hear ‘No’



IAP2 Spectrum of Public Participation

IAP2's Spectrum of Public Participation was designed to assist with the selection of the level of participation that defines the public's role in any public participation process. The Spectrum is used internationally, and it is found in public participation plans around the world.

INCREASING IMPACT ON THE DECISION

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

CVEA & USNC Engagement

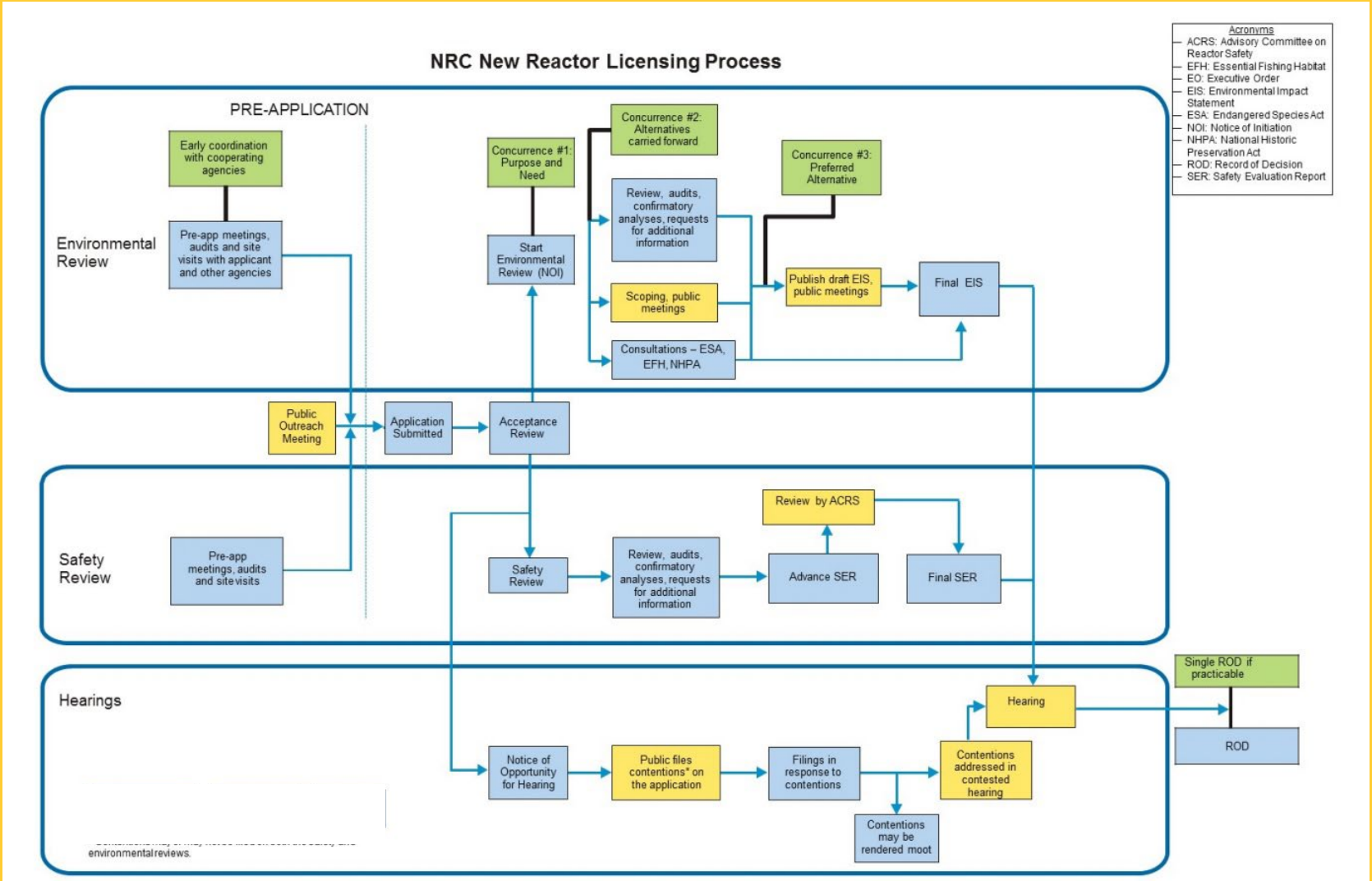
- Valdez
  - City Council
  - Ports and Harbor
  - Police, Fire
  - School Board

- Prince William Science Center
- Valdez Fisheries Development Association

- Alaska Native Corporations (3)
- Alaska Federation of Natives
- Alaska Native Village Corporation Association
- ANCSA Regional Association

Federal Pathway to Deployment

Feasibility Study



Key points for public

EO 13807 activities

Milestones

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Thank You

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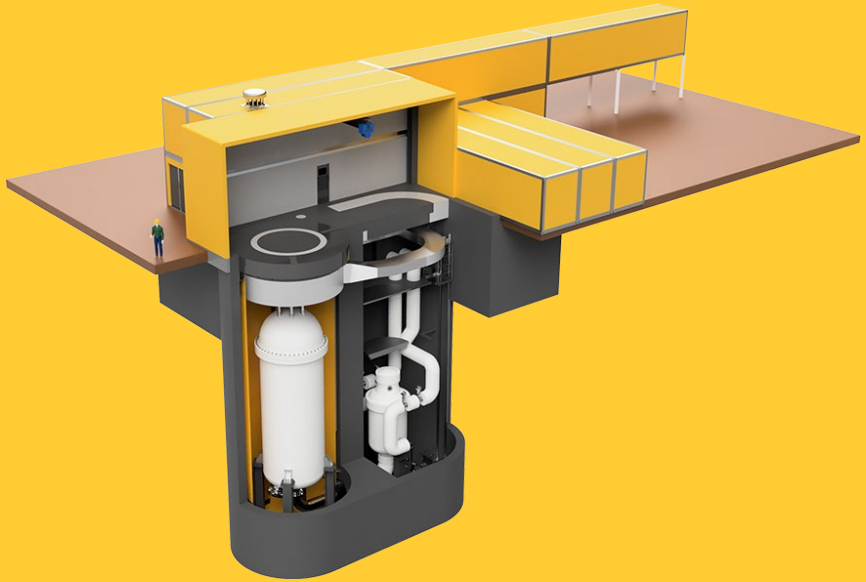
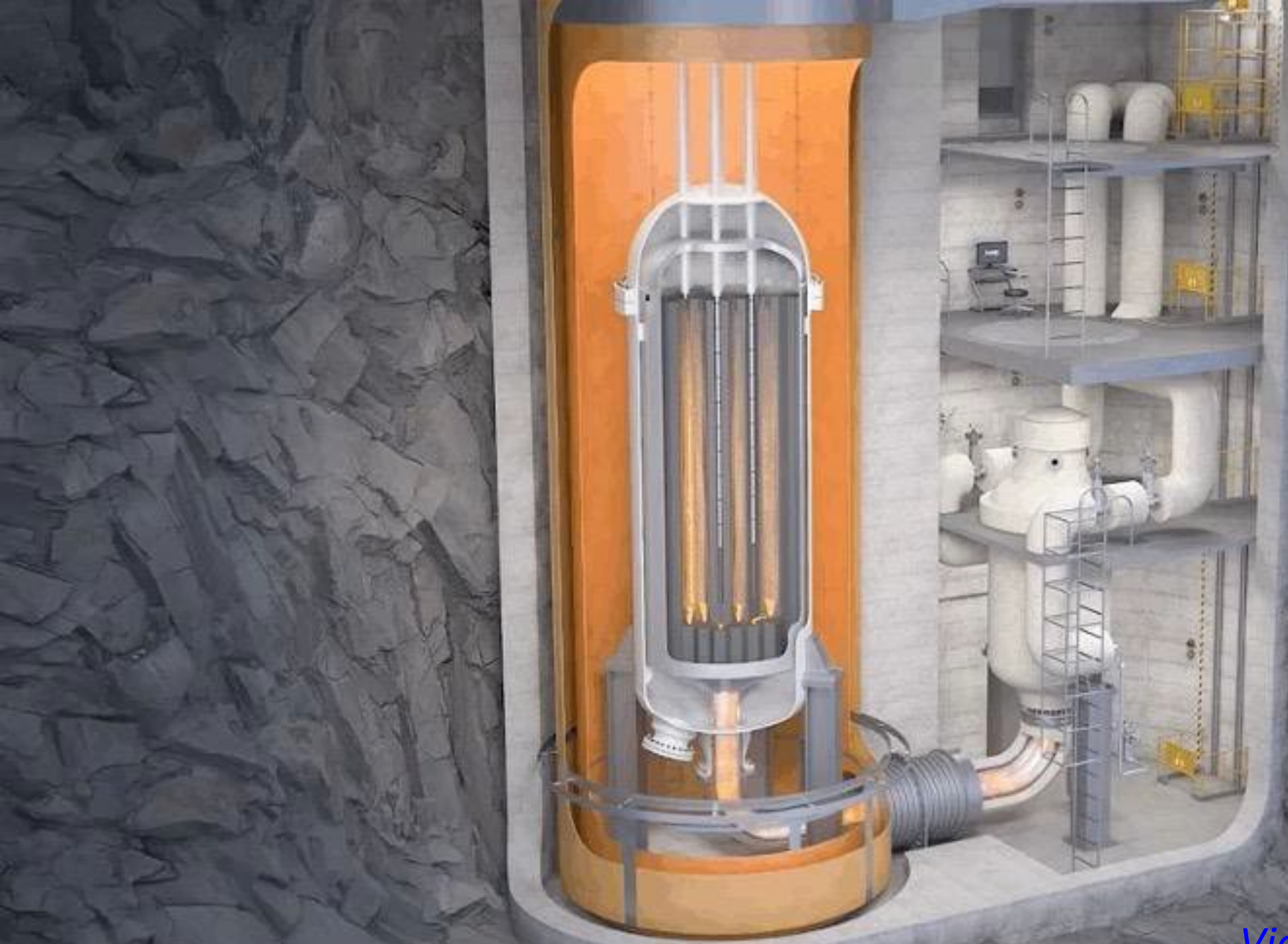
Supplemental Information

What is a microreactor and why?

- A microreactor (MMR) is a small nuclear reactor that can operate as part of the electric grid, independently from the electric grid, or as part of a microgrid
- The MMR can generate up to 10 megawatts thermal energy
- MMR Can be used to generate electricity and provide heat for industrial applications
- It emits no carbon and provides reliable, resilient, demand driven power
- The reactor design is self-regulating so cannot melt down
- The refueling cycle is dependent upon how much energy is drawn from it, but on average will go for 15 years without a need for refueling





First commercial micro-reactor product

MMR™ "Energy Unit"

Fully Fuelled

Equivalent to:
1B kWh (electric) charged battery
or 3B kWh (thermal) heat storage

Can produce: <u>power as needed</u>, up to 10 MWe
or <u>heat as needed</u>, up to 30 MWt

Video: USNC Standard of Safety