

Day 2: Manufacturability, scalability, and economics of conceptual designs

Breakout session questions

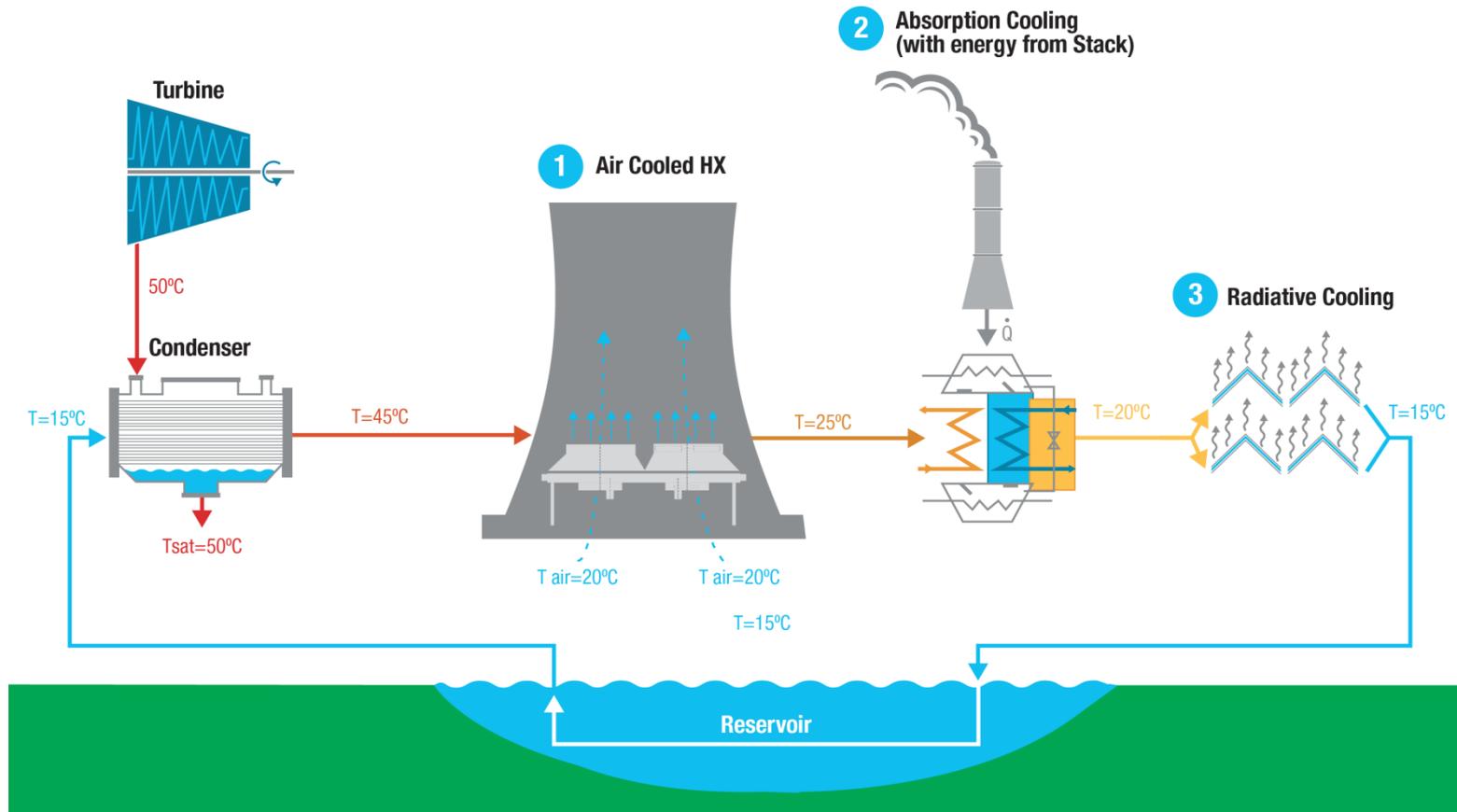
May 23, 2014



**Revisiting the concepts discussed during day 1,
identify viable manufacturing routes.**

ARPA-E Program Vision Overview

Advanced manufacturing technologies to fabricate transformational designs at the MW scale at low cost



Without being constrained to commercially available routes, what might be the ideal manufacturing process for each concept and why?

Can this technique(s) be enabling for low cost in the short term? Long term?

Do new manufacturing techniques need to be developed? What is needed?

Could Additive Manufacturing technologies play a significant role? For which components?

Can additive manufacturing be more than just a prototyping tool for this application?

Which joining technologies are preferred for this application and why?

A challenge for the power plant cooling market is that typically only a handful of very large units are required. What other markets should be considered to sustain a business?

- ▶ What requirements for scalability does this introduce?
- ▶ How does this affect the system design and manufacturing processes that you would want to employ?
- ▶ Can these systems be modularized in such a way that they meet the needs of the large valuation markets?

How much can these manufacturing routes integrate with today's supply chain?

Are there opportunities for manufacturing routes that positively disrupt the current supply chain in such a way that leads to less cost?*