

8th IAEA DEMO Program Workshop
August 29 – September 2, 2022
Vienna

Session 3:

Efficiency: coolant selection, cost and delivering time

Session 3 - Outline

- Central Idea: Efficiency
 - Cost efficiency
 - Energy efficiency

- Elements:
 - Plasma Performance
 - Coolant & Balance of Plant
 - Recirculating Power
 - Grid integration
 - Interdependencies

Session 3 - Outline

■ Cost ???

- Resources
- Manufacturing
- Safety standards
- Lifetime
- ...

➔ Mostly not covered here!

Session 3 - Outline

- Efficiency vs. Delivery time
 - Development time
 - Design & construction time
 - **Urgency**

- Parallel Developments

- Management of Expectations

Session 3 - Program

- **Plasma physics performance and impact on plant efficiency**
Yoshiteru Sakamoto and Yutaka Kamada
- **Thermal power management in view of the coolant choice and the balance of plant** - Wolfgang Hering and Luciana Barucca
- **Electrical power management – the path toward energy production**
Elena Gaio
- **Nuclear power plant digital twinning for efficient operation**
Qing Li
- **Fusion plant flight simulator – present status**
The Fenix flight simulator as a component of the power plant model for DEMO
- Emiliano Fable
Digital Twin Technology for Fusion Plant Flight Simulator - Jae-Min Kwon