

Platform Mooring

Session 2

- Mooring technology is mature and has been demonstrated in more challenging and demanding environments, it's a matter of detailing and optimization to make it economic and viable in the environment for which it's deployed.
- Key driver that will affect the evolution of OTEC mooring systems is cost.

Question 1

- **Manufacturability**
 - Achievable with COTS or custom products
 - Low to no risk
- **Mobilization & Deployment**
 - Achievable with COTS or custom products
 - Highest risk, high cost, most opportunity for cost savings

Question 1

- Operability
 - No special technology required
 - Existing techniques sufficient, slight modification may be required
- Reliability
 - No major issues

Question 1

- Logistics
 - Existing techniques and systems are sufficient
- Scalability
 - Yes
 - Some consideration for size and location
 - Cost driver

What risks are associated with failure with these processes?

- Manufacturing quality and testing to mitigate unexpected failures.
- Reduced confidence in the system.
- Risk of inability to deploy effectively & safely.
- Significant delay in startup
- Additional costs
- System failure
- Not accurately identifying risk and defining risk mitigation
- Limitation on overall size & placement of OTEC

Question 3:

What are the cost drivers for this component? What are possible cost-savings? What research could be done on cost reduction?

- ***Cost Drivers:***
- Spares;
- Site conditions; location; water depth
- installation, vessel time
- material costs
- required performance
- installation risk & insurance
- labor cost
- permitting & regulations
- removal and decommissioning costs & requirements

- ***Cost Savings:***
- Mooring optimization (single point vs. multi point mooring)
- Coordination of Optimization of design of platform
- Less stringent motion and survivability requirements
- Citing
- Identifying the high cost factors and mitigate them
- Optimize the cost of vessel & transportation
- Self installing