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