State of the Art

- Available Technologies
  - Codes and standards for cable construction
    - IEEE and IEC
    - ABS, DNV, and API
  - Many manufactures
    - Larger availability with lower voltage
  - Armoring: Steel
  - In water cable transition (platform to ocean bottom)
    - Can be computer modeled
    - Software readily available

State of the Art cont.

- Cable Voltage rating up to 500 kV
  - AC
    - Single Phase is 69 kV and up
    - Three phase cable below 69 kV
    - AC within 20 miles of shore
  - DC
    - Available up to 400 kV today
    - Has to be converted on both ends
- Standard Splicing Technology
    - Typ. done in factory
- Standard Shore Landing
    - Directional drilling
    - Trenching
- Proven Durability
- Corrosion

Manufacturers

- JDR Cable Systems
- ABB
- Nexans
- Sumitomo
- Siemens
- South bay
- General Cables
- Falmat
- Parker Scancorp

Challenges Specific to OTEC

- Applicable standards specifically for OTEC
- Hydrostatic pressure
- Large vertical riser cable
- Mechanical termination technology at the platform
- Modeling
  - Connection of cable
  - Mechanical dynamics of the cable
- Cable Installation