

DOCKETED	
Docket Number:	24-SB-605
Project Title:	SB 605 Wave and Tidal Energy - Phase 2
TN #:	262569
Document Title:	Presentation - Electrical Infrastructure
Description:	April 2 Workshop Presentation 4 - Aspen Environmental Group
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Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	4/2/2025 4:12:39 PM
Docketed Date:	4/2/2025

Chapter 4: Electrical Infrastructure

- ◆ Onshore Electrical Transmission
 - ❖ Transmission Line (> 200 kV)
 - ❖ Power Line (50 kV to 200 kV)
 - ❖ Distribution (<50 kV) – extends to the end users of electricity
- ◆ Offshore Electrical Transmission
 - ❖ Offshore Electrical Cables (132 kV up to 420 kV); designed to resist saltwater corrosion & mechanical stresses
 - ❖ Generation capacity of wave & tidal is small, so distribution scale

Chapter 4: Electrical Infrastructure

- ◆ Wave & Tidal Energy: Required Electrical Infrastructure
 - ❖ Offshore WECs located as far as 20 km from shore
 - ❖ Onshore WECs located in shallow water at the shoreline
 - ❖ Subsea cables bring power to shore & connect to electric utility substation
 - ❖ Existing or Planned Worldwide: 1 kV to 13 kV
 - ❖ WEC combined with offshore uses – no subsea cabling
 - ❖ WEC combined with offshore wind

Chapter 4: Electrical Infrastructure

- ◆ PacWave South test site
- ◆ Five 30 kV to shore electrical cables

