



MANAGING MARINE SPATIAL CONFLICTS WITH ALTERNATIVE ENERGY FACILITIES

Disparate
Legal
Protections,
Regulation,
and Policy
Priorities
Create Rather
than Resolve
Conflict

Alternative energy facilities are subject to extensive coastal-state jurisdiction under international law

- United Nations Convention on the Law of the Sea ("UNCLOS") grants coastal states extensive rights over the exploration and exploitation of living and non-living resources
- Within the exclusive economic zone ("EEZ"), the coastal state has "sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds."

Undersea cables enjoy unique rights and freedoms under various treaties and customary international law

- Among other rights and freedoms, UNCLOS guarantees:
 - Freedom to install and maintain undersea cables on the continental shelf, subject to reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources
 - Freedom to install and maintain undersea cables in EEZs of all states
 - Ability to install undersea cables in a state's territory or territorial sea subject to conditions and exercise of national jurisdiction
 - Freedom to maintain existing undersea cables passing through the waters of an archipelagic state without making landfall
- Coastal states also have obligations to prevent willful or negligent damage to cables, and to show due regard for existing cables and pipelines

Extensive regulation of alternative energy activities has fostered specialist regulators that champion energy activities above others in the marine environment

- By contrast, undersea cable operators usually lack similar government champions

Alternative energy activities also benefit from a favorable political climate

- Governments prioritize the discovery of cheaper and greener sources of energy, which technological innovations further enable
- Many governments offer significant subsidies for alternative energy activities

Private-agreements approach long used to mitigate conflicts with offshore oil and gas may be less effective

- Traditional agreements focus on cable-pipeline and cable-power transmission cable crossings and on spacing of facilities
- Negotiation requires willing counterparties in the energy sector

Selected Risks
Posed by
Alternative
Energy
Facilities

Bottom scouring by wind turbines increases risk of cable faults

- Wind turbine towers and support structures change currents, resulting in erosion of sediment on structures, including adjacent undersea cables
- Scouring exposes cables and increases abrasion by disturbed sediments
- Risk of scouring requires that cables be buried more deeply, making installation and subsequent retrieval for repairs more difficult, time-consuming, and costly

Facilities impede access on the ocean surface and seafloor for installation and maintenance

- Turbines, turbine towers, and hydroelectric turbines present obstacles precluding cable ships from having ready access to the sea floor
- Impaired access could delay repairs, prolong system outages, and increase operator and customer costs

De facto corridors reduce route diversity

- Alternative energy facilities could encourage further clustering of cables in gaps between facilities, further complicating access for vessels, sea plows, grapnels, and ROVs
- Reduced diversity increases risks of multiple system outages due to a single external aggression event, such as a dragged anchor or an earthquake, with economic and national-security consequences
- Cable operators could be forced to route through more heavily fished areas, anchorages, dumping grounds, dredged areas, and similar regions with increased risk of cable damage or fault

Proximity to and crossings with power transmission cables and inter-turbine cables

- Offshore energy generation systems often use multiple inter-turbine cables and transmission cables to export electricity to the shore
- Proximity to and crossings with such cables increase risk of damage and fault and impose transaction costs for crossing agreements

Increased anchoring by vessels serving offshore energy facilities

Strategies for
Reducing
Conflict and
Ensuring
Protection of
Undersea
Cables

Educate governments and alternative energy developers about:

- Primacy of undersea cables (versus satellites) for connectivity
- Economic and national-security importance of undersea cables
- Spatial needs of undersea cables, including details on the mechanics of installation and maintenance operations
- The benign environmental impact of undersea cables
- Existing industry (particularly ICPC) standards for spacing and crossings
- Existing coordination mechanisms with oil and gas industries
- Cable protection initiatives by foreign governments, particularly Australia and New Zealand cable protection zones

Participate consistently and actively in government policymaking, regulations development, and project permitting for energy facilities; consider litigation to challenge legal deficiencies in government action

- Silence often taken as acquiescence

Educate communications regulators, economic and finance ministries, and security agencies regarding the potential adverse consequences of poor marine regulation that disfavors undersea cables

Make cable-protection and -coordination standards more public and accessible

- Providing ICPC and SCUK recommendations on request limits awareness and undermines the effectiveness of standards
- Greater availability helps to establish baselines and core principles in policymaking and adjudications for particular offshore energy projects.

Seek more robust liability statutes for cable damage

- In many countries, statutory penalties for cable damage have not changed since the late-19th century

Enlist local customers in the fight for more appropriate and effective marine policies

- As wholesalers, network owners often lack retail-brand name recognition
- Undersea cable operators are often foreign-owned and not seen as domestic political constituents

Promote undersea-cable specific regulatory proposals

- These include: regulations or guidelines for cable crossings and minimum separation distances and cable protection or exclusion zones
- Sometimes, the best defense is a good offense