

The guidance documents are intended to be available for regulators and advisors as they carry out their decisionmaking and for developers and their consultants as they prepare consenting and licensing applications. This country-specific document presents an overview of key consenting requirements relevant for marine renewable energy development in the United States from pre-application, through to application and post-consent and is intended mainly for developers and consultants. It is not intended to replace any formal guidance or prescribe action, but rather provide a starting point for understanding the key requirements of the regulatory framework.

China regulatory context

In China, consenting processes for marine renewable energy (MRE) projects usually consist of applications for power permits, sea area use rights, above water and underwater activity licenses, submarine cable and pipeline route investigation and laying construction, and completion of a marine environmental impact assessment (EIA).

Consents and licenses are regulated by several administration authorities, implemented in an integrated management system that includes national unified supervision and authorization to local government hierarchically. Table 1 shows the information of the consents (permissions), authorities and regulations, for MRE projects. The main national administration authorities include the State Oceanic Administration (SOA), National Energy Administration (NEA), Ministry of Ecological Environment (MEE), Ministry of Natural Resources (MNR). Additional authorities may be involved at the local level.

Table 1. Consents, authorities, and regulations for MRE projects in China.

Consent	Authority	Legislation/Regulation	Specific stipulation
Power	National Energy	Administration Regulations	NEA is responsible for the supervision
permit	Administration	for Supervision of Power	and administration of power business
	(NEA) and	Business License ²	licenses nationwide, and its local
	its local agencies		agencies are responsible for local
			permits within their jurisdiction.
		Notice to NEA on	MRE projects with an installed
		Implementing the Reform	capacity of less than 6MW are not
		of "Release Management	included in power business license
		and Service" and	management.
		Optimizing the	
		Management of Power	
		Business License ³	
Sea Area Use	National and local	Law of the People's	Article 3 requires that units and
Rights	marine	Republic of China on the	individuals who will use sea areas
	administrative	Administration of the Use	must obtain sea area use rights.
	departments	of Sea Areas ⁴	

 $^{^{1}}$ This country-specific document should be read in conjunction with the background guidance document, which can be found on Tethys: https://tethys.pnnl.gov/guidance-documents.

⁴http://www.gov.cn/gongbao/content/2001/content 61173.htm

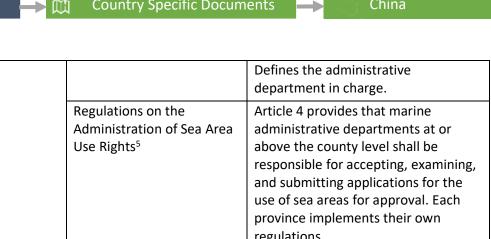


²http://zfxxgk.nea.gov.cn/2020-12/25/c_139629696.htm

³http://zfxxgk.nea.gov.cn/2020-03/23/c 138960403.htm

km need not go through examination

and approval.



		Administration of Sea Area Use Rights ⁵	administrative departments at or above the county level shall be responsible for accepting, examining, and submitting applications for the use of sea areas for approval. Each province implements their own regulations.
Marine environ- mental impact assessment	National and local marine ecological and environmental protection departments	Marine Environmental Protection Law of the People's Republic of China ⁶ , Regulations on the Prevention and Control of Marine Environment Pollution and Damage by	A marine environmental impact assessment (EIA) report is required to be prepared and submitted to the relevant administrative department for examination and approval before the construction of the project.
		Offshore Projects ⁷ Regulations on the Management of Environmental Impact Assessment of Offshore Projects ⁸	Defines the EIA system and the regulators.
		Approval procedures for EIA report of offshore projects of State Oceanic Administration ⁹	The Ministry of Ecology and Environment (MEE) ¹⁰ is responsible for the approval of the EIA reports for MRE projects such as tidal energy, wave energy, and temperature gradient.
Application for submarine cable and pipeline	Branches of the State Oceanic Administration (SOA)	Measures for the implementation of provisions on administration of the laying of submarine cables and	Defines the process for application and approval of submarine cable and pipeline route investigation and laying construction. The submarine cable and pipeline with a length less than 2

pipelines¹¹

route

investigation

¹¹http://english.mofcom.gov.cn/aarticle/lawsdata/chineselaw/200211/20021100050627.html



⁵http://english.mee.gov.cn/Resources/laws/environmental_laws/202012/t20201211_812661.shtml

⁶http://www.mee.gov.cn/ywgz/fgbz/fl/201805/t20180517 440477.shtml

⁷http://www.gov.cn/zhengce/2020-12/27/content_5574861.htm

 $^{^8}http://f.mnr.gov.cn/201806/t20180628_1942481.html$

⁹http://f.mnr.gov.cn/201806/t20180629 1965976.html

¹⁰ According to the 2018 Plan on Deepening Reform of Party and State Institutions (http://www.gov.cn/zhengce/2018-03/21/content 5276191.htm#1), the marine environmental protection responsibilities were transferred from the State Oceanic Administration to the MEE.

and laying construction			
Above water and underwater activity license	Local maritime administrative agency	Regulations of the People's Republic of China on the Administration of Navigation Safety for Above Water and Underwater Activities ¹²	Defines the process for application of above water and underwater activity license, which is required for any project in the marine environment.

Species and/or populations at risk

Potential effects to species and/or population in China are regulated by the Ministry of Ecology and Environment (MEE) and the Ministry of Natural Resources (MNR) (Table 2).

Table 2. Regulations related to species and/or populations at risk.

Agency	Relevant Statute	Implementation
Ministry of Ecology	Regulations on the	A marine project Environmental Impact
and Environment	Prevention and Control	Assessment (EIA) is required to conduct
(MEE) and local	of Marine Environment	comprehensive analysis, prediction, and
marine ecological and	Pollution and Damage by	assessment, and put forward corresponding
environmental	Offshore Projects	ecological protection measures to prevent,
protection		control, or mitigate the impact and damage of the
departments		project on marine environment and marine
		resources. Consult is required with fishery
		administrative departments.
	Technical Guidelines for	It defines the contents of EIA of marine energy
	Environmental Impact	development project, which contains marine
	Assessment ¹³	ecological and biological resources impact
		assessment.
Ministry of Natural	Technical Guidelines for	Analysis of ecological and resource impacts of the
Resources (MNR) and	Sea Area Use	project are significant contents of sea area use
marine administrative	Assessment ¹⁴	assessments. An ecological impact analysis
departments		includes effects on biological resources, rare and
		endangered species, and communities. A marine
		biological resource impact assessment is needed,
		and the loss of living resources (including fishery
		resources) caused by the project needs to be
		evaluated. Consultation is required with fishery
		administrative departments.

¹⁴ http://f.mnr.gov.cn/201807/t20180703 1995363.html



¹²http://www.gov.cn/gongbao/content/2019/content 5395485.htm

 $^{^{13}\}underline{https://english.mee.gov.cn/Resources/standards/others1/Technical_Guideline_EIA/$

Habitat alteration or loss

Potential effects to habitat are regulated by MEE and MNR, which are important parts of marine EIA and Sea Area Use Assessment (Table 3). Impacts on species and habitats are often assessed simultaneously in the marine EIA.

Table 3. Regulations related to habitat alteration or loss.

Agency	Relevant Statute	Implementation
Ministry of Ecology	Marine Environmental	The state delineates protected areas for key marine
and Environment	Protection Law of the	ecological function, sensitive and fragile areas
(MEE) and local	People's Republic of	(Article 3). Chapter III requires protection of typical
marine ecological and	China	and representative marine ecosystems such as
environmental		mangroves, coral reefs, coastal wetlands, islands,
protection		bays, estuaries, and important fishery waters.
departments		Marine nature reserves are established in areas with
		high species abundance or concentrated areas of
		rare and endangered species. Project site selection
		should accord with marine functional zone
		management and strictly abide by marine ecological
		red line regulations. 15
Ministry of Natural	Regulations on the	Establishes functional divisions of the seas to protect
Resources (MNR) and	Administration of Sea	and improve the ecological environment and ensure
local departments	Area Use Rights	sustained utilization. Consultation is required with
		fishery administrative departments.
	National Marine	MRE zones are designated as a subclass of the
	Functional Zoning	minerals and energy zone according to the
	(2011-2020)	classification system of marine functional zones. It
		requires that MRE projects should prevent
		topographic changes of islands, beaches, and seabed,
		and shall not affect the adjacent marine ecological
		sensitive areas and sub sensitive areas.

Effects on water quality

Potential effects on water quality are regulated by MEE and MNR (Table 4).

Table 4. Regulations related to effects on water quality

Agency	Relevant Statute	Implementation
Ministry of Ecology	Regulations on the	Chapter III describes pollution prevention and
and Environment	Prevention and	controls to consider in design and environmental
(MEE) and local	Control of Marine	assessment. County-level departments are
marine ecological and	Environment Pollution	responsible for supervision and inspection of
environmental	and Damage by	operations and investigation of marine pollution
protection	Offshore Projects	violations. MRE project zones follow the second class
departments		of sea water quality standard or above in China.

¹⁵ Marine ecological red line refers to a management system where important marine ecological functional zones, ecological sensitive zones and ecological fragile areas are classified as key control zones under strict classified control, so as to protect the health and safety of the marine ecology.





	Technical Guidelines	Assessment of effects on water quality is a necessary
	for Environmental	part of the marine EIA.
	Impact Assessment	
	Marine Environmental	The state establishes and implements a total
	Protection Law of the	pollution control system in key sea areas, determines
	People's Republic of	the total control index of major pollutants discharged
	China	into the sea, and allocates discharge control
		quantities to major pollution sources. Specific
		measures shall be formulated by the State Council.
		Units and individuals that directly discharge
		pollutants into the ocean must pay pollutant
		discharge fees in accordance with national
		regulations.
Ministry of Natural	Regulations on the	For the sea area use assessment of marine project, it
Resources (MNR) and	Administration of Sea	is required to forecast and estimate the oceanic
marine administrative	Area Use Rights,	hydrology and hydrodynamics conditions,
departments	Technical Guidelines	topography, erosion and deposition, water quality,
	for Sea Area Use	and sediment conditions.
	Assessment	

Effects on social and economic systems

Potential effects on social and economic systems are mainly regulated by MEE and MNR (Table 5).

Table 5. Regulations related to effects on social and economic systems.

Agency	Relevant Statute	Implementation
Ministry of Ecology and Environment (MEE) and local marine ecological and environmental	Regulations on the Prevention and Control of Marine Environment Pollution and Damage by	For the EIA of a marine project, it is recommended to analyze and forecast effects on adjacent sea area functions and other sea using activities, and to make environmental economic cost-benefit analysis.
protection departments	Offshore Projects, Technical Guidelines for Environmental Impact Assessment	
	Marine Environmental Protection Law of the People's Republic of China	Chapter III requires protection for areas of marine natural relics with cultural value, as well as restoration of marine ecology that has important economic and social value.
Ministry of Natural Resources (MNR) and marine administrative departments	Regulations on the Administration of Sea Area Use Rights, Technical Guidelines for Sea Area Use Assessment	The applicants need to conduct a coordination analysis of sea area development and utilization, including impacts on other activities in the sea area, defining stakeholders, analysis of conflicts between stakeholders, and coordination of relevant interests. They also need to consult with departments in charge of channel, anchorage, navigation, flood control, and fisheries, if needed.





Additional Information

Marine Spatial Planning

In China, marine function zoning (MFZ) is a kind of marine spatial planning for sea use activities that divides marine space into different functional zones by following the criteria of MFZ. MFZ not only provides the legal basis for marine management but also guides the distribution of industries in marine space, including MRE.MFZ plans are implemented at national, provincial and municipal, or county levels. The third generation MFZ, National Marine Functional Zoning (2011-2020)¹⁶, covered all sea areas under the jurisdiction of China. Each coastal province (autonomous regions and municipalities), city, or county has completed and implemented its MFZ plan.

The current MFZ divides the marine area into 8 primary classifications and 22 secondary classifications of basic marine functional zones. In the classification system, the MRE zone is defined as a subclass of the minerals and energy zone, which refers to the sea areas used for developing and utilizing tidal energy, wave energy, and other renewable energies.

Each kind of functional zone has specific management requirements, and provincial and municipal MFZ agencies design their requirements for the management and regulation of sea-use types, sea-area governance, environmental conservation, as well as quality of sea water, marine sediment, and marine biology. During the approval process, an MRE project must be examined and assessed to determine whether it meets the MFZ management requirements.

Adaptive Management

There is no formal regulation for adaptive management for MRE in China at present.

Consistency Between Jurisdictions

The application and consenting processes of MRE are multi-sectoral and multi-system collaborative processes. Figure 1 shows the applications and consenting processes of MRE.

¹⁶http://f.mnr.gov.cn/201806/t20180621 1830454.htmlhttp://www.ncsb.gov.cn/n1/n128/n235/n259/18020714442493 8665.html



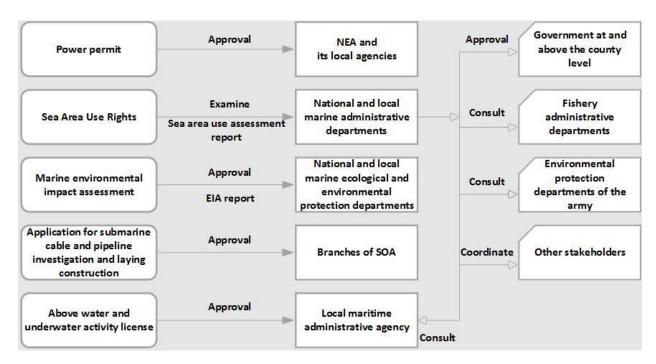


Figure 1. Applications and consenting processes of MRE.

