



国家海洋局第一海洋研究所

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Ocean Energy Policies and Standards in China

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Contents

- Laws and plans
- Public funding
- Market incentives
- Test sites

Policies



- Standard system design
- GB and HY standard

Standards





1. Laws and Plans

—Laws



中华人民共和国可再生能源法

中国法制出版社

The Law of Renewable Energy
(amendment), implement from
Apr 2010

**Establishing the grantee system for
acquisition of electricity generated by RE**

Special funds for the development of RE

Special Fund for Ocean Renewable Energy





13th Five-year Plan

SOA released “**The Plan of Marine Renewable Energy Development (2016-2020)**” in Dec 2016.

Guidance:

- Increasing the maturity level of technologies (TRL);
- Boosting the OE engineering;
- Improving the reliability and stability of power generation





13th Five-year Plan

Objectives



50 MW installed capacity



5+ MRE demonstration stations on isolated islands



One 10MW tidal power station



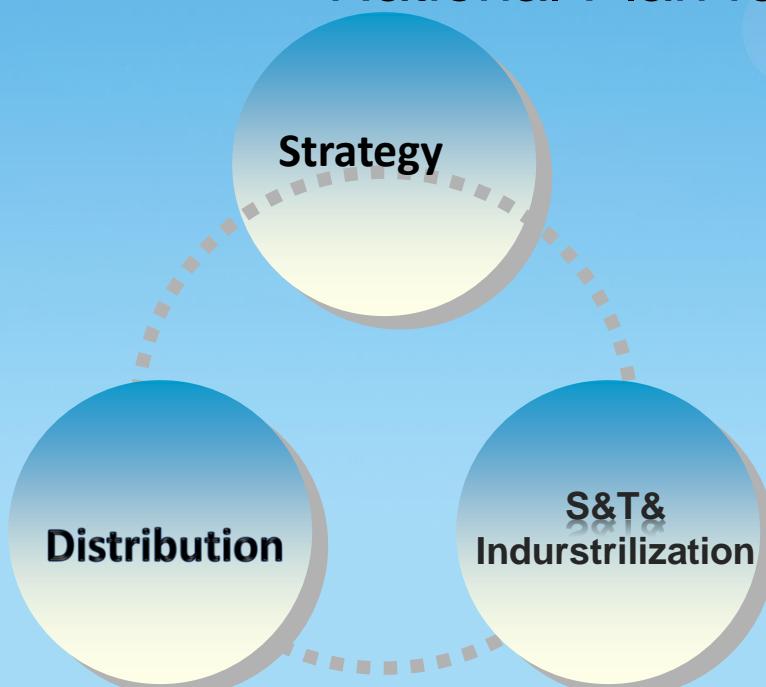
2 demonstration bases in Zhoushan and Wanshan





OE related Plans

- ✓ The Plan of RE development (2011~2015)
- ✓ The Plan of RE development (2016~2020)
- ✓ National Marine Functional Zoning (2011-2020)
- ✓ National Plan for Islands Protection (2011-2020)





2. Public funding programs

- *Special funding programs by MOF&SOA*
- *S&T Innovation programs by MOST*



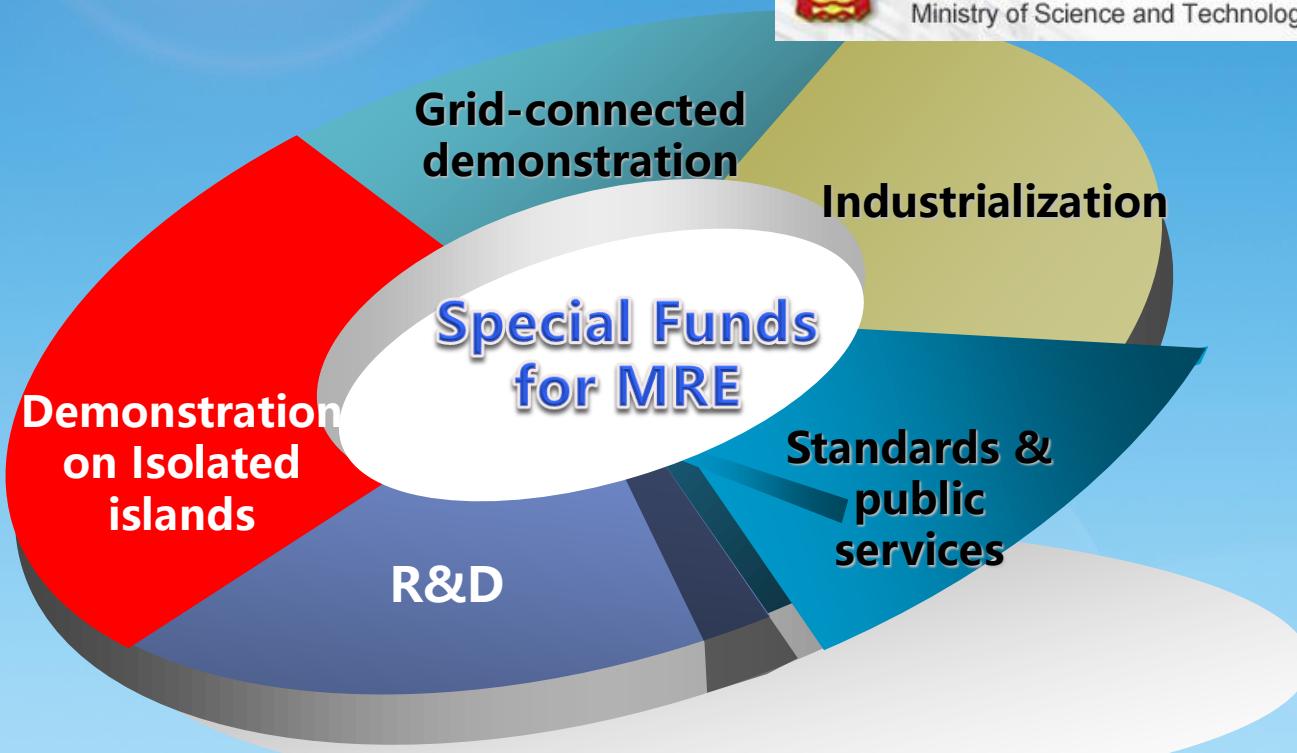
中华人民共和国财政部

Ministry of Finance of the People's Republic of China



中华人民共和国科学技术部

Ministry of Science and Technology of the People's Republic of China

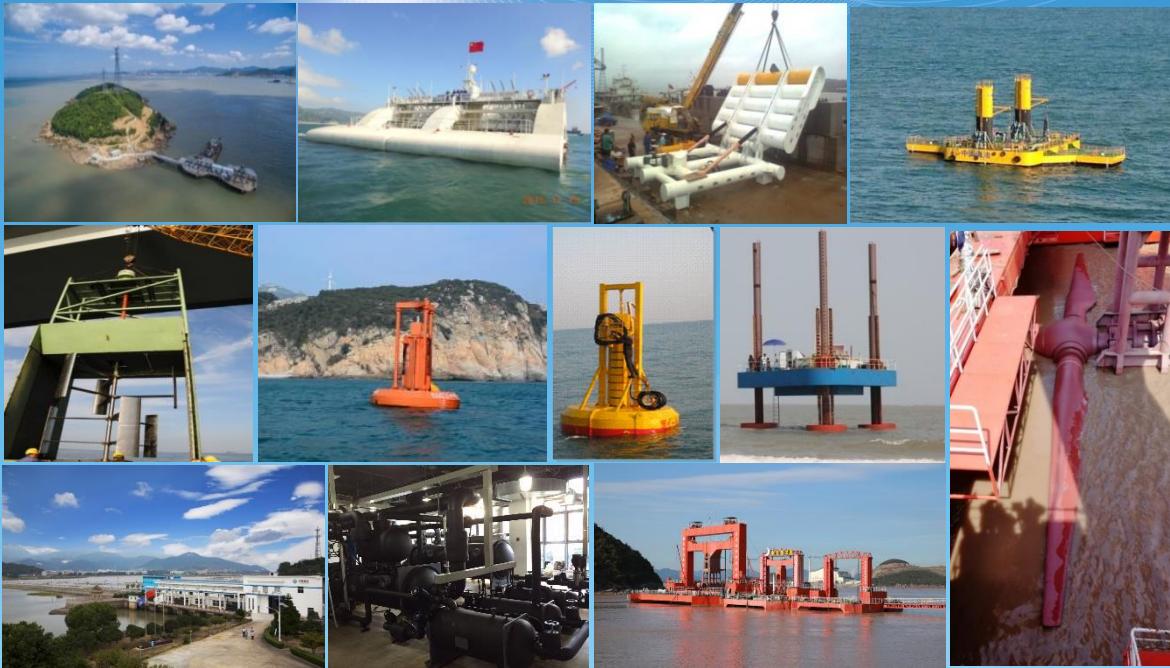


More than 110 MRE projects were funded

\$200 million USD(2010.5-2018.6)



3. Market incentives



Specific Implementing Measures for Renewable Energy, no specific for OE

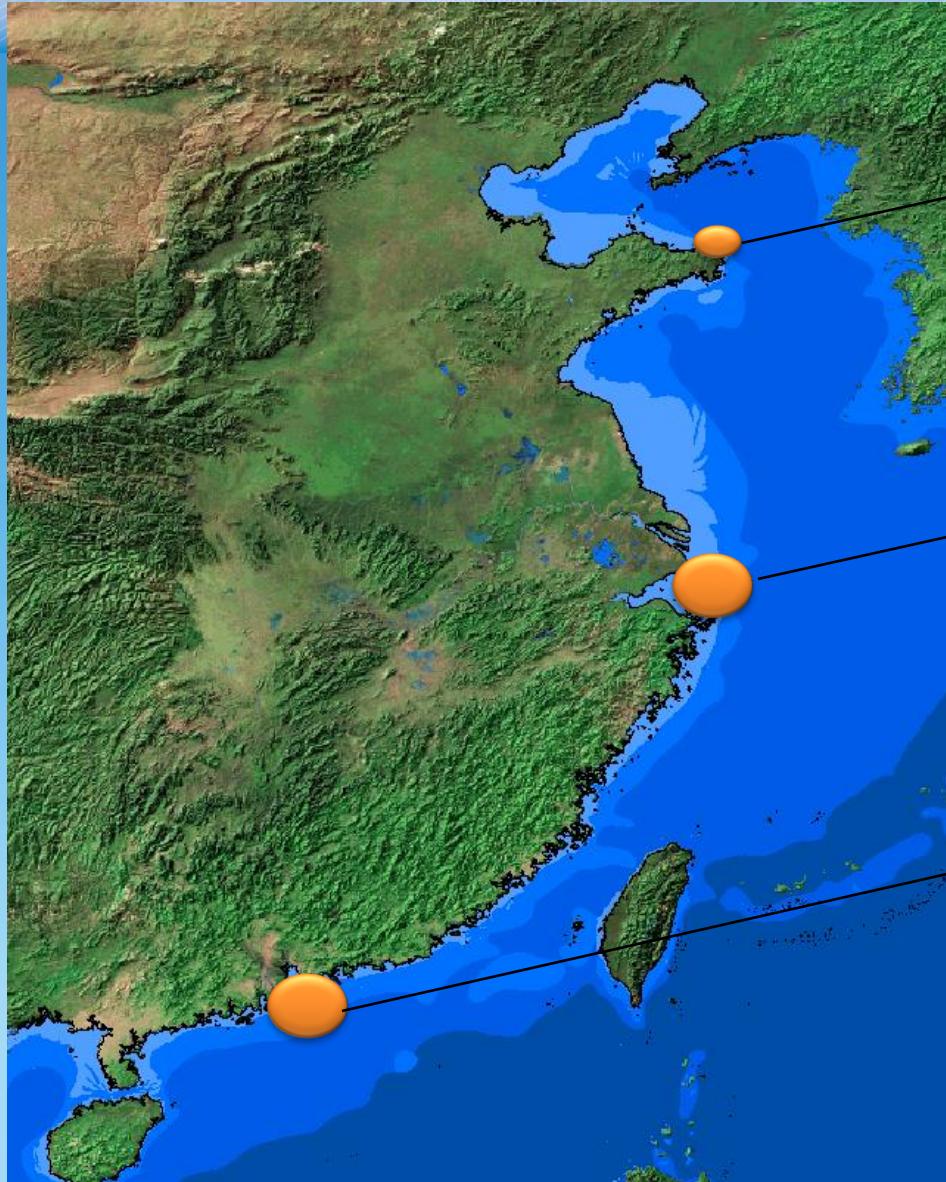


- 可再生能源产业发展指导目录
 - 可再生能源发电有关管理规定
 - 可再生能源发电价格和费用分摊管理试行办法
 - 可再生能源发展专项资金管理暂行办法
 - 电网企业全额收购可再生能源电量监管办法
 - 可再生能源电价附加收入调配暂行办法
 - 可再生能源发展基金使用管理暂行办法

5 times as the total
in the past 30 years



4. Test sites



National
comprehensive wave
and tidal current
energy test site
(constructed from 2014.10)

National full scale tidal
current energy test
site
(constructed from 2017.6)

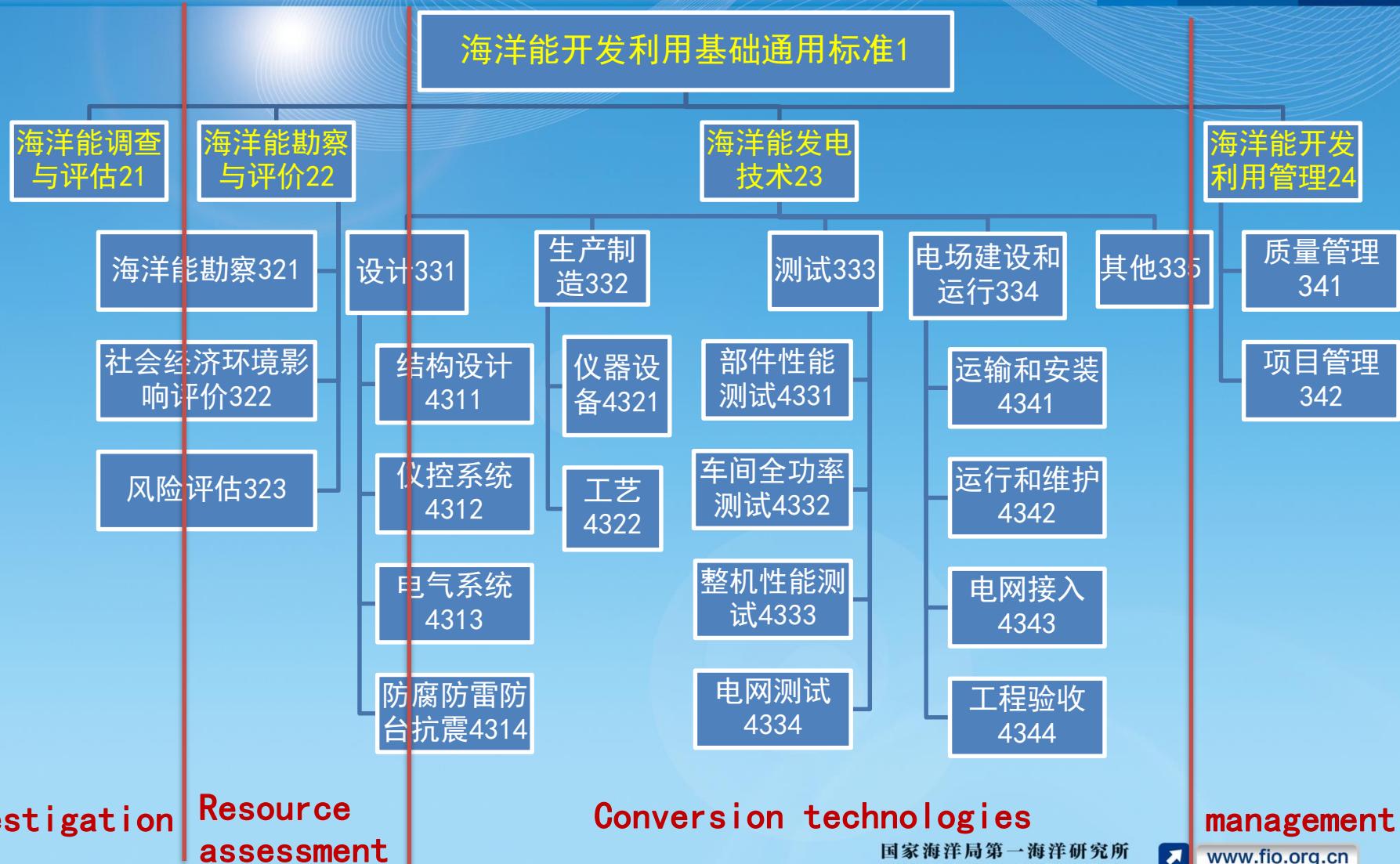
National full scale
wave energy test site
(constructed from 2017.12)





1. Standard system design

226 standards



investigation

Resource
assessment

Conversion technologies

management



2. National standard(GB) approved

- 9 GB standards approved till Apr 2018, 7 GB standards are researching

GB/T 33543.1-2017	海洋能术语 第1部分：通用	2017.7.1
GB/T 33543.2-2017	海洋能术语 第2部分：调查和评价	2017.7.1
GB/T 33543.3-2017	海洋能术语 第3部分：电站	2017.7.1
GB/T 33441-2016	海洋能调查质量控制要求	2017.7.1
GB/T 33442-2016	海洋能源调查仪器设备通用技术条件	2017.7.1
GB/T 34910.1-2017	海洋可再生能源资源调查与评估指南 第1部分：总则	2018.2.1
GB/T 34910.2-2017	海洋可再生能源资源调查与评估指南 第2部分：潮汐能	2018.2.1
GB/T 34910.3-2017	海洋可再生能源资源调查与评估指南 第3部分：波浪能	2018.4.1
GB/T 34910.4-2017	海洋可再生能源资源调查与评估指南 第4部分：海流能	2018.2.1





2. Industrial standard(HY) approved

- 9 HY standards approved till Apr 2018, 2 HY standards are researching

HY/T 045-1999	海洋能源术语	1999.7.1
HY/T 155-2013	海流和潮流能量分布图绘制方法	2013.5.1
HY/T 156-2013	海浪能量分布图绘制方法	2013.5.1
HY/T 181-2015	海洋能开发利用标准体系	2015.10.1
HY/T 182-2015	海洋能计算和统计编报方法	2015.10.1
HY/T 185-2015	海洋温差能量分布图绘制方法	2015.10.1
HY/T 186-2015	海洋盐差能量分布图绘制方法	2015.10.1
HY/T 183-2015	海洋温差能调查技术规程	2015.10.1
HY/T 184-2015	海洋盐差能调查技术规程	2015.10.1



Prospects



Testing
Facilities



Technology
Development



Incentive
Policies

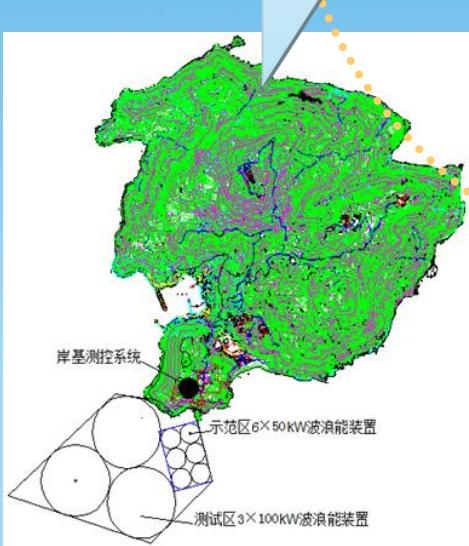
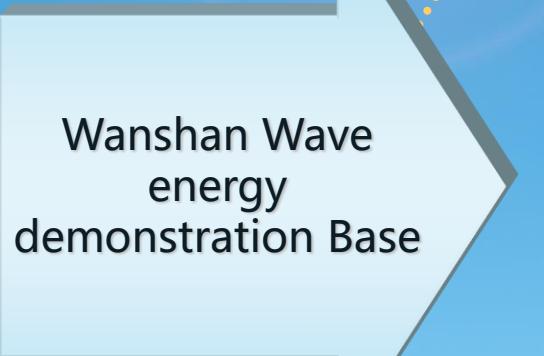


industrialization

- To demonstrate in large scale
 - To develop technologies&devices
 - To establish specific OE incentive policies
 - To optimize industrialization environment



To establish OE demonstration bases



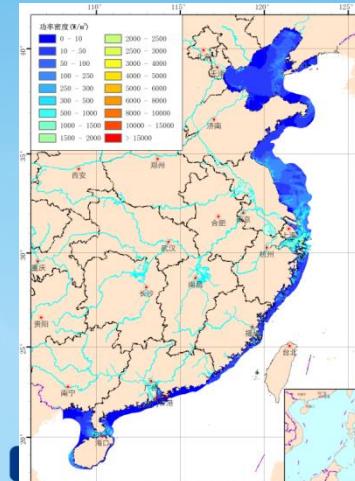
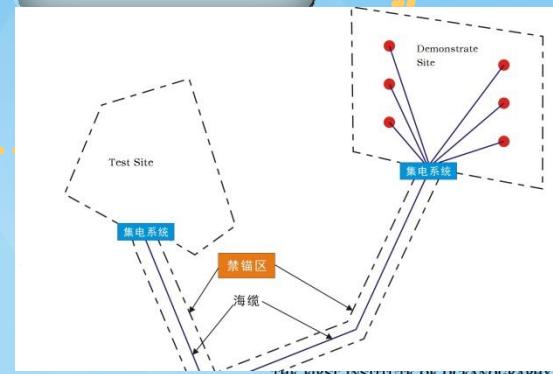
Manufacture

Testing & Evaluation

Deployment & Maintenance

Demonstration

Zhoushan Tidal current energy demonstraion Base





*Thanks for your
attentions!*