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| Study/Report | Technological | Economical/Supply chain | Regulatory/Environmental | Infrastructure and Support | Link |
| Ocean Energy Status Report 2014 | Device and System Demonstrators   * Installation & recovery methods * Low-cost O&M techniques   Sub-Components   * Control systems * Energy extraction technology (e.g. blades, interaction surfaces) * PTO * Device structure * Foundations and mooring systems * Offshore umbilical & wet mate connectors   Infrastructure and Enablers   * Offshore grid system design and demonstration * Array electrical systems * Onshore grid system development   Sub-sea electrical system equipment |  |  |  | [https://setis.ec.europa.eu/sites/default/files/reports/2014-JRC-Ocean-Energy-Status-Report.pdf](https://scanmail.trustwave.com/?c=17268&d=0ZuD3cbfrgBvg8DCcHTIsfgVGfIizK8merXAkxL9Jw&s=5&u=https%3a%2f%2fsetis%2eec%2eeuropa%2eeu%2fsites%2fdefault%2ffiles%2freports%2f2014-JRC-Ocean-Energy-Status-Report%2epdf) |
| Ocean Energy Forum  OCEAN ENERGY STRATEGIC ROADMAP 2016 | Testing and modelling  Reliability and survivability  Installation and logistics  Power generation and grid  Wave: Innovation to deploy large farms |  | Improving planning, consenting and environmental permitting to speed up project’s delivery | Insurance and Guarantee funds  Investment support funds  Standardisation of the industry leading to certification | <https://webgate.ec.europa.eu/maritimeforum/sites/maritimeforum/files/OceanEnergyForum_Roadmap_Online_Version_08Nov2016.pdf> |
| TPOcean Strategic Research Agenda for Ocean Energy 2016 | Demonstration, Testing and Modelling   * Deploy demonstration projects to generate learnings necessary for commercialization * Technology development through validated numerical models and small-scale prototypes   Materials, Components and Systems   * Develop high quality seaworthy materials * Increase yield with improved power take-off * Validation of components and sub-systems * Control systems to increase performance and operability * Condition monitoring systems to optimise operation and maintenance   Installation, Logistics and Infrastructure  Reduce uncertainty, risk and cost of foundations, anchoring systems and cables  Power transmission and array cable architecture | Building a case for investments, including LCoE analysis  Develop manufacturing expertise for ocean energy   * Streamline manufacturing processes to drive down costs   Access to ocean energy sites, design adapted processes and vessels | Standards, health, safety and environment |  | <https://www.oceanenergy-europe.eu/wp-content/uploads/2017/03/TPOcean-Strategic_Research_Agenda_Nov2016.pdf> |
| Study on Lessons for Ocean Energy Development, EC, 2017 | Technical problems:   * device failed partially or completely. * components, structural problems, station keeping, survivability, * rapid wearing or corrosion etc. due to fatigue or inadequate designs /materials.   Grids  Installation and maintenance | Financial problems:  matching funds for public grants   * increase the shareholder contribution from private equity due to not meeting milestones or delays, * costly repair etc.   a company being sold or going into administration or the business has been shut down | Site characterisation  Environmental impacts | Public procurement of technological innovation (WES)  Organize systematic knowledge sharing  Ocean energy clusters  Access to test sites  Change of finance and market conditions (ROCs, FITs)  Competition for money with e.g. onshore & offshore wind | <http://publications.europa.eu/resource/cellar/03c9b48d-66af-11e7-b2f2-01aa75ed71a1.0001.01/DOC_1> |
| OES International Vision for OE 2017 | Design optimisation and tool development  Structure & prime movers  Foundations & Moorings  PTO& Control Systems  Array systems & subsea connections  Installation, operational maintenance & recovery | Market Incentives  Industry and Supply Chain Development |  | Energy policy driven capacity or generation targets  Capital Grants and Financial Incentives  Resource Allocation and Industry Standards  Research and Testing Facilities and Infrastructure | <http://www.oceanenergysystems.org/documents/73666-oes-vision-2017.pdf/> |
| ETIPOCEAN: Integrated Strategy for the OE sector 2019 | Develop device design & numerical modelling methodologies  Develop and iteratively redevelop of higher performance/lower cost devices, components & sub-system:   * Power take-off systems – e.g. direct drive turbines, bi-radial wave turbines * Moorings, foundations, anchors & cable connections * Control systems that monitor conditions and respond dynamically to mitigate adverse impacts * Novel materials for blades, moorings, power take offs & hull * Protections against corrosion and biofouling   Improve device reliability & survivability | Prototype:  Use first results to prove concept and attract initial investors  Demonstration:  Produce data on performance, reliability, survivability & costs to showcase risk reductions to investors  Begin standardisation of device, components and sub-systems  Competitive outsourcing of some components & sub-systems  Develop successively larger devices to improve power to cost ratios | Prototype:  Generate first data on environmental impacts to inform consenting & licensing regimes  Demonstration:  Generate data on environmental impacts to inform consenting & licensing regimes  Provide examples to inform national Marine Spatial Plans  Develop of standard procedures for monitoring of environmental impact of projects |  | <https://www.etipocean.eu/assets/Uploads/ETIP-Ocean-Integrated-Strategy-2019.pdf> |