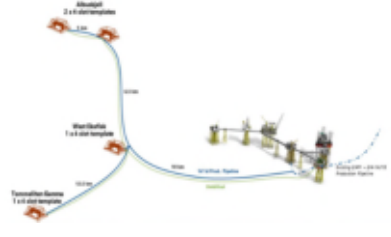
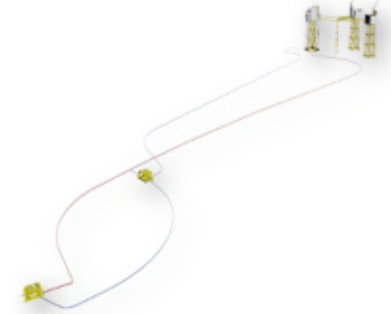

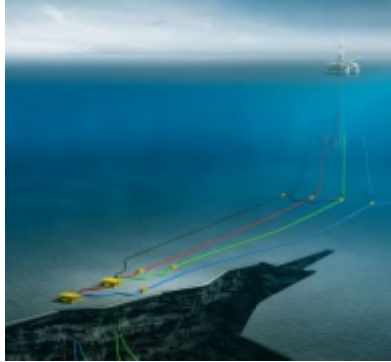
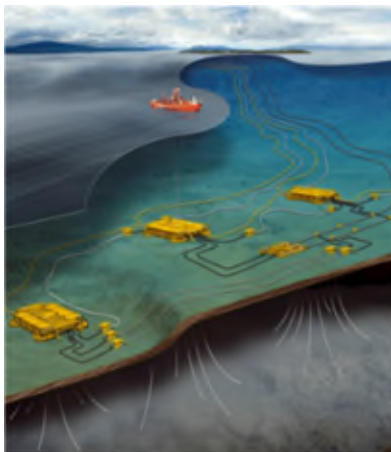
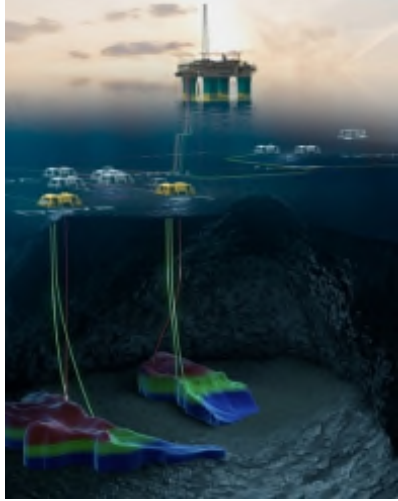
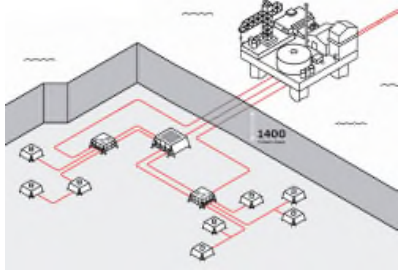

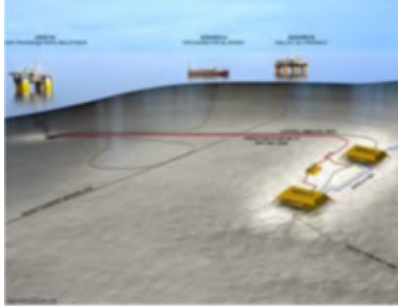
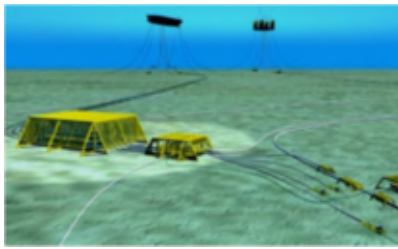
	<p><b>Power from Sørige Nordsjø 2</b> 2024 - 2025 <b>Client: ConocoPhillips</b></p> <p>The SURF Design FEL-2 study investigated possible solutions for routing and tie-in of subsea power cables connecting Ekofisk and Eldfisk Complexes to the SNII Wind Farm.</p> <p>The work included:</p> <ul style="list-style-type: none"> <li>• Input to Design Basis and Functional Spec for subsea cables</li> <li>• Route design including approach layouts</li> <li>• Identify and describe all crossings and crossing design</li> <li>• Trenching and rock dumping solution for selected route</li> <li>• Subsea cable stability and in-place design</li> <li>• Evaluation of interaction/interference from/to live assets</li> <li>• Evaluation of installation methods</li> <li>• Pull-in design / suitability of nominated J-tubes.</li> <li>• Dropped object assessment and protection design</li> <li>• Input to Material Take Off</li> <li>• Input for crossing agreements.</li> <li>• Input for environmental impact assessment</li> </ul>
	<p><b>Previously Produced Fields (PPF)</b> 2023 - 2025 <b>Client: ConocoPhillips</b></p> <p>Concept development and Pre-FEED of the subsea tie-back of West Ekofisk, Albuskjell and Tommeliten Gamma to Ekofisk Z. The work included:</p> <ul style="list-style-type: none"> <li>• Systematic evaluation of potential development concepts</li> <li>• Perform sufficient engineering to recommend SPS concepts</li> <li>• SURF engineering</li> <li>• Flow Assurance</li> <li>• Cost and schedule estimates</li> <li>• System design responsible</li> <li>• Follow-up of EPCI suppliers</li> </ul>
	<p><b>Tommeliten Alfa</b> 2019 - 2025 <b>Client: ConocoPhillips</b></p> <p>Pre-FEED, FEED and detail engineering &amp; follow-up of the Tommeliten Alfa subsea tie-back project</p> <ul style="list-style-type: none"> <li>• System design responsible</li> <li>• SPS design (Template, Xmas tree system, Control system, manifold system, Subsea HIPPS, Tooling)</li> <li>• SPU system (Separation technology, Flow measurement, Pump design)</li> <li>• SURF design (Field layout, Flowline design, Umbilical design)</li> <li>• Flow Assurance design</li> <li>• Evaluation of available J-tube solutions</li> <li>• Cost and Schedule estimates</li> <li>• Follow-up of EPCI suppliers</li> </ul>

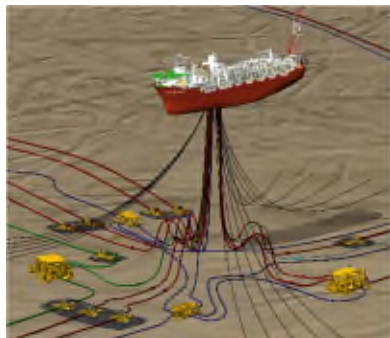
	<p><b>Dugong &amp; Beta</b> <span style="float: right;">2023 - 2025</span>  <b>Client: Vår Energi</b></p> <p>RENE provides owner's engineering services for the subsea tie-back of Dugong and Beta fields to Snorre B.</p> <p>As being fully integrated in Company's project team for Management, Administration and Follow-up of the field development project, RENE cover the following key positions:</p> <ul style="list-style-type: none"> <li>• Lead SURF engineer</li> <li>• Lead SPS engineer</li> </ul>
	<p><b>Fenja project</b> <span style="float: right;">2017 - 2022</span>  <b>Client: Neptune Energy</b></p> <p>RENE provided the necessary technical expertise and resources required to secure handling of Neptune Energy's technical responsibilities as development operator from the Front End Engineering Design (FEED) phase throughout the Fenja project execution phase (EPCI).</p> <ul style="list-style-type: none"> <li>• System engineering</li> <li>• Lead SURF engineer</li> <li>• Lead Pipelines engineer</li> <li>• Lead Material engineer</li> <li>• Technical support and verification activities</li> <li>• Follow-up of EPCI-contractor (SURF &amp; SPS)</li> <li>• Quality &amp; Audit support</li> </ul>
	<p><b>Ormen Lange Phase 3 – FEED, Post-FEED and Detail Design.</b> <span style="float: right;">2017 - 2025</span>  <b>Client: Norske Shell</b></p> <ul style="list-style-type: none"> <li>• Landfall design (Umbilical pull-tubes w/caps)</li> <li>• Field layout design</li> <li>• Pipeline routing and design, expansion and VIV analyses, and input to ECA</li> <li>• Umbilicals routing from Nyhamna to the field, 2x120 km</li> <li>• Umbilicals bottom roughness and free span analyses</li> <li>• Protection and Seabed intervention design; Pre-lay and Post-lay Rock installation vs. Trenching</li> <li>• Geotechnical engineering of all Seabed intervention work</li> <li>• Follow-up of subsea rock installation work</li> <li>• Follow-up of trenching operations</li> </ul>

Subsea Infrastructure Projects

	<ul style="list-style-type: none"> <li>• Assurance support; review of manufacturing documents and procedures, follow-up of procurement, qualifications and fabrication activities.</li> <li>• Interface management</li> </ul>
	<p><b>Gjøa Subsea Projects</b> <span style="float: right;">2019 - 2025</span>  <b>Client: Vår Energi</b></p> <p>RENE is providing the necessary technical expertise and resources required to secure handling of Vår Energi's technical responsibilities as operator for the Gjøa Subsea Projects, i.e. P1&amp;Duva, Gjøa Nord, Ofelia and Cerisa.</p> <ul style="list-style-type: none"> <li>• SPS advisor in the project team</li> <li>• Material advisor in the project team</li> <li>• System engineering</li> <li>• Review, verifications and follow-up of study contractor's work (SURF &amp; SPS)</li> <li>• Pipeline corrosion evaluations</li> </ul>
	<p><b>Janz-lo Compression / retrofit insulation</b> <span style="float: right;">2022 - 2024</span>  <b>Client: Chevron / Vipo</b></p> <p>The Jansz-lo Compression retrofit insulation scope involved retrofit fitting of thermal insulation to the existing and operating 30" export spool between the Jansz MPTS and the Jansz PLET at a water depth of ca. 1 350 m.</p> <p>The overall work scope included the engineering and qualification of a suitable ROV installable, and recoverable retrofit insulation system, which enables management of localized internal condensation with risk of localized corrosion through the provision of thermal insulation.</p> <p>Suitable thermal insulation covers designed for the different spool sections. The scope covered the qualification of a suitable retrofit thermal insulation subsea system, as well as securing that the CP system will be functional during the remaining lifetime of the spool after retrofit insulation. RENE was responsible for the engineering design including Thermal Analysis, CP Analysis, Structural Analysis, Installation Analysis, and the Monitoring requirement study.</p>

	<p><b>Ekofisk Water Injection (EKOVC)</b> <span style="float: right;">2017</span>  <b>Client: ConocoPhillips</b></p> <p>Engineering Services related to the EKOVC water injection project including preparation of project design basis and project specifications.</p> <p>The work also comprised design document review, design verifications and procurement support for CPI deliveries.</p>
	<p><b>Browse Field Development</b> <span style="float: right;">2017</span>  <b>Client: Woodside</b></p> <p>Concept select phase Browse Field Development          RENE’s scope of work included:</p> <ul style="list-style-type: none"> <li>• Confirm technical feasibility of DEH for Calliance/Breaknock and Torosa subsea flowlines</li> <li>• Provide sufficient equipment details, functional descriptions, weights and dimensions.</li> <li>• Establish a Class 1 cost estimate .</li> <li>• Identify any risks or opportunities associated with DEH systems for the Browse facilities.</li> </ul>
	<p><b>Luno II Trawl Assessment</b> <span style="float: right;">2017</span>  <b>Client: Technip FMC</b></p> <p>Support to TechnipFMC on the FEED for the Luno II – Value Engineering.</p> <p>Four satellite wells on the Luno II field (2 production and 2 WI) are planned to be tied-back to the Edward Grieg platform (20 km).</p> <p>RENE’s Scope of Work included a Trawl Assessment study evaluating the trawl interference of the Umbilical and Gas lift lines (i.e. impact, pullover, hooking) and the protection requirements.</p>

	<p><b>Maria Subsea FEED</b> <span style="float: right;"><b>2013 - 2014</b></span>  <b>Client: Wintershall</b></p> <p>The Maria subsea facility is tied via rigid flowlines and flexible risers to Kristin with gas lift being supplied from Åsgard B via Tyrihans and Sulphate reduced sea water supplied with injection pressure from Heidrun.</p> <p>The Maria Subsea FEED project covered the following engineering activities included:</p> <ul style="list-style-type: none"> <li>• System Engineering</li> <li>• Flow Assurance</li> <li>• SPS System; X-mas trees, manifold, workover</li> <li>• Control System</li> <li>• Pipeline System</li> <li>• Pipeline components (SSIV, PLEM's and PLETs)</li> <li>• Riser System</li> <li>• Umbilical System</li> <li>• Cost &amp; Schedule</li> </ul>
	<p><b>Åsgard Subsea Compression</b> <span style="float: right;"><b>2011 - 2015</b></span>  <b>Client: Statoil</b></p> <p>Detail design of the subsea pipeline system. The work started with a refinement and update of the FEED results from 2010.</p> <p>The scope comprised overall layout, routing and design of flowlines, MEG lines, power cables, umbilicals and fiber optical cable (FOC) to/from the compressor station, existing templates/PLEM's, hottaps on the Midgard loop and Åsgard A and B, including all associated seabed intervention work.</p> <p>Further design of all tie-ins and expansion spools (21 off), PLEM/PLET/Riser Base structures (19 off) and verification of the compressor manifold station (SCMS). A new spool design guideline to be developed as part of the project in cooperation with DNV.</p> <p>Development of MTO's, input to ITT's and assistance to Company with contracts for prefabrication of structures and installation of lines and structures, and follow-on engineering services during the fabrication and installation phases</p>



### Skarv Field Development

Client: BP Norge

- Evaluation for location of FPSO
- Number of and size of flowlines
- Flowline and Export pipeline route alternatives
- Concept evaluation of expansion control. Perform bottom roughness analyses and fatigue assessment of pipeline free spans. Evaluate requirements and methods for mitigation of free spans. On-bottom stability analyses
- Corrosion allowance evaluation. Material Evaluation. Initiate comprehensive test program (Sintef/Bodycote) to support Flowline material selection
- Wall thickness and stability calculations of all piping
- Bundle vs. Single line evaluation (price estimates, risk and interv. design)
- Complete schedule / Budget for fabrication and installation
- ITT technical input (e.g. piping; material, fabrication and installation)
- Assisted in material purchase in Germany and Japan
- DEH at Sintef; dimensioning of cable
- Seabed intervention and estimation of rockdump infill volumes



### Ekofisk Area Frame Agreement 1995 - 2015

Client: ConocoPhillips

Frame agreement covering all phases of SURF projects in the Ekofisk Area

1995 – 1997	Ekofisk II verification
1997	Eldfisk Water Injection Detail Engineering
1997	Ekofisk II Fuel gas line – Detail Engineering
1997 – 1999	Ekofisk II/Eldfisk – Basic Engineering
1999 – 2000	H7 Subsea Bypass – Concept & Basic Eng
2003 – 2005	FTP Bypass – Detail Engineering
2006	Eldfisk Upgrade – Detail Engineering
2006	Eldfisk 2 – Conceptual Study
2009 – 2009	Norpipe B11 Bypass – Detail Engineering
2009	Norpipe Looping – Conceptual Study
2012 – 2013	Tor II – FEED Study
2013 – 2014	Tommeliten Alfa – Conceptual Study
2013	Norpipe / Teeside – Conceptual Study
2015	Tommeliten Alfa – FEED Study

	<h3>Ormen Lange Southern Field Development</h3> <p>Client: Statoil <span style="float: right;">2007 – 2010</span></p> <p>Tie-back of Template D to the Phase I gas transportation pipelines going to the Nyhamna onshore process facilities. The flowline system includes 2 x 16" production lines, a 6 5/8" MEG line and a control umbilical. Each line is 13 km long. The development area is in 850 m waterdepth and the seabed is very irregular and with very soft clay and stiff clay features spread out in the area. Tie-in to the 30" gas pipelines included hot-tapping at pre-installed T-hubs.</p> <p>Detail and follow-on engineering design for flowlines, umbilicals and protection structures. The main topics included:</p> <ul style="list-style-type: none"><li>• Field lay-out architecture and flowline routing</li><li>• Flowline and coating design</li><li>• Pipe –soil interaction definition</li><li>• Free span, fatigue and expansion design</li><li>• Tie-in spool design</li><li>• Seabed intervention design (excavation, rock dumping, jetting)</li><li>• CP design</li><li>• HSE engineering including dropped object analyses</li><li>• Lead interface</li><li>• Offshore supervision and onshore duty service</li></ul>
	<h3>Dual pipe separator</h3> <p>Client: Seabed Separation AS <span style="float: right;">2018</span></p> <p>Development of an installable concept for a subsea dual pipe separator.</p> <p>The work has been an early phase assessment of system design, equipment needs and assessments of the extent of marine operations.</p> <p>The separation system includes the flexibility to contain several equipment packages depending on specific field requirements, both in relation to fluid capacity and the need for water injection and / or multi-phase boosting.</p>

# REINERTSEN experience history

## Export Pipeline Projects

Haltenpipe  
1993-96



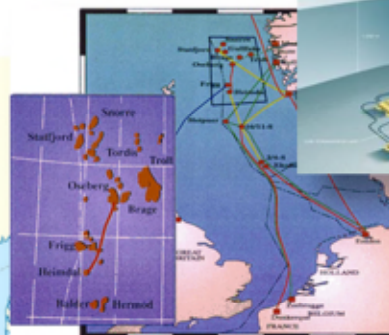
Troll Phase I  
1993-96



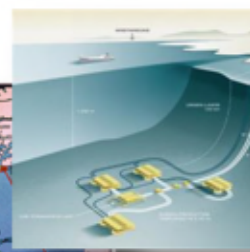
Zeepipe II A & B  
1992-97



Oseberg  
Gas Transportation  
1997-99



Ormen Lange  
subsea pipelines  
2003-2022



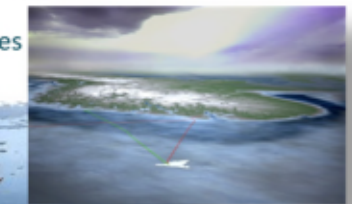
Langeled  
2003-2008



P12  
Troll to Kollsnes  
2009-2011



Johan Sverdrup  
Export pipelines  
2014-2016





# REINERTSEN experience history Major Subsea Infrastructure Projects

Ekofisk subsea infrastructure

Skarv SURF FEED

Ormen Lange subsea pipelines

Sjøhvit subsea infrastructure

Åsgard SGC subsea infrastructure

Maria Subsea FEED

Johan Sverdrup Export pipelines

The collage features eight overlapping images of subsea infrastructure projects. From left to right, the projects are: Ekofisk subsea infrastructure (a network of pipes and risers), Skarv SURF FEED (a large yellow subsea module), Ormen Lange subsea pipelines (a complex network of pipes and risers), Sjøhvit subsea infrastructure (a large yellow subsea module), Åsgard SGC subsea infrastructure (a large yellow subsea module), Maria Subsea FEED (a large yellow subsea module), and Johan Sverdrup Export pipelines (a large yellow subsea module). The images are arranged in a staggered, overlapping fashion, creating a sense of depth and progression.