



# Upstream Consulting Services

## Procedural design approach yields efficiency gains

*Transitioning field development projects from the early project phases to the engineering, procurement and construction phase demands agility, accuracy, control and flexibility. Because these early assessments are so critical, it pays to have the right tools and people in place.*

### Faster, more consistent project transitions

Siemens Oil & Gas Consulting offers field development planning, concept selection and design and front-end engineering and design (FEED) for onshore and offshore upstream projects. Our capabilities, tools and experience help ensure rapid, configurable and auditable transitions from the concept stage to the EPC stage.

Siemens technical consultants deliver complete technical definition, capital expense and operational cost estimates for oil and gas projects worldwide. We offer a full range of project, process, mechanical, facilities, I&E design and engineering disciplines. Our capabilities include such technical details as:

- Throughput and production plateau shaping
- Horsepower reduction
- Brownfield and debottlenecking
- Substructure selection
- Pipeline modeling

### Objective decisions for the early project life cycle

From high-level screenings for prospect evaluation to detailed topsides and substructure weight and cost calculations for selecting the optimum field development concept, we help clients make objective decisions at various stages of a project with due consideration to technical requirements, cost and schedule estimates, risk assessments and environmental constraints.

We systematically assess the feasibility and viability of a range of development concepts, including:

- Subsea developments
- TLPs and mini-TLPs
- Semi-subs
- FPSOs and FPDSOs
- Spars
- Deep and shallow water subsea pipelines and risers
- Compliant towers
- Conventional and minimal jacket concepts
- Gravity-based substructures and gravel islands
- Onshore field developments

## Focus, expertise and technology

Siemens' range of capabilities includes:

- Arctic facilities
- High CO<sub>2</sub> field developments
- Life cycle energy efficiency modeling
- Midstream pipeline terminals and facilities

## Siemens technology drives confidence


Siemens technical consultants utilize Oil and Gas Manager (OGM) software, an industry standard project design tool created to develop complete technical definition and capital cost estimates for oil and gas development projects worldwide.

OGM's advanced capabilities help address critical design, cost, HSE and economic timeline considerations.

## Industry-wide proficiency

In addition to the core competencies of field development planning, concept and FEED, Siemens also offers the following services:

- Project management
- Cost estimation
- Risk assessment and process hazard analysis (HAZOP, LOPA, SIL)
- Process optimization and facility debottlenecking
- Project execution and contracting strategy planning
- Process safety information management
- Mechanical integrity and risk-based inspection
- Pressure relief and flare analysis



For more information about this and other professional consulting services, contact us at 1 (800) 658-8809 or +1 (713) 570-2900 or [info.ogm@siemens.com](mailto:info.ogm@siemens.com).

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