Providing Specialist Advice to the Oil & Gas Sector
SLR Consulting is an independent environmental and natural resource consultancy that is dynamic and fast-growing, with an expanding network of offices in the UK, Ireland, Canada, the USA, Australia, and Africa, and an international client base. We provide multidisciplinary advice from in-house experts on a wide range of corporate and environmental strategic and site specific issues.

SLR’s approach is to listen carefully to our clients’ needs then provide straightforward, client-focused advice that is technically sound and makes the best business sense. We provide outstanding customer service based on industry experience, integrity, commitment, quality, and value. Fundamental to SLR’s established track record is that our senior and experienced personnel are actively involved in projects. SLR’s policy is that nominated Project Managers actively direct and manage projects working closely with each client to deliver high-quality work products on time and within budget.

Our approach has lead to long, successful relationships with our clients. Over two thirds of our revenue today is generated by clients that have used SLR for 3 years or longer, and many of our multinational oil and gas clients have relied on SLR services for more than 15 continuous years.
Oil and Gas – Sector Overview

SLR provides services to all stages of the oil and gas value chain, from exploration through to retail. We help our clients achieve, maintain and retain social and regulatory compliance. Our strong technical background enables us to develop holistic solutions that integrate social and environmental risk with more traditional petrotechnical risk management.

Our integrated approach enables the industry to manage above ground risk in increasing challenging political, environmental and social circumstances. The ‘early stage engagement’ process is central to our risk management approach.

Niche business consulting expertise in exploration and socio economic risk management build on the full range of operational services ranging from seismic acquisition through to oil and gas infrastructure environmental planning and permitting.

In addition to the broad oil and gas sector we have specific services in following sectors:

- Business Consulting
- Exploration
- Arctic and cold regions
- Unconventional oil and gas
- Natural Gas

SLR provides a suite of core environmental services supported by expertise targeted to the particular sector. Our core services are:

- Resource evaluation and CPR for both conventional and unconventional resources
- Transaction support and due diligence, both subsurface and environmental
- Geological and geophysical evaluation, from basin through to prospect and development
- Geophysical and geological operations support
- EIA, social engagement, permitting, planning and consenting
- Oil spill contingency planning, including specialist waste management expertise
- Site remediation and restoration
- Water management

We consult to exploration and production (E&P) companies large and small, serving as trusted partners to provide strategic advice as our clients expand globally. Our regional centres have longstanding relationships with leading companies and host governments where SLR leverages our local expertise with a global perspective.

This brochure provides a broad view of the range of oil and gas services that SLR offers. Our strategic services are based on critical issues that relate to growth and corporate social responsibility. At the same time we are a world leader in the many technical disciplines that are required to support E&P, delivered to the global oil and gas market.
Business Consulting

SLR’s specialist consultants and associates provide strategic support to exploration leadership teams that covers strategy formulation through to new country entry risk mitigation. The depth of SLR’s expertise allows us to provide a comprehensive approach to manage above ground risk. This includes optimising the company’s interface with both communities and nations.

We advise both E&P companies and governments on the continually evolving industry best practice to explore for hydrocarbons. Our services are based on understanding the geological conditions and building a business case founded on a sound appreciation of subsurface risk and associated value.

We provide the following types of expertise:

- Exploration strategy formulation – where to explore to meet corporate budget and risk exposure
- Exploration performance and process – the underpinnings to exploration excellence
- Reputation management and above ground risk mitigation
- Social and reputation risk management
- Strategic in-country investment programme management.

All our lead consultants are specialists in their fields and incorporate market leading thinking in our solutions. In particular we focus on integrating social and environmental considerations into core technical management structures and processes.
Services to Exploration

SLR provides the complete range of services to assist managing an exploration or development programme. SLR can work with leadership teams to either manage the elements of the entire process or augment the companies’ in-house staff. We support both conventional and unconventional exploration and production, onshore and offshore and throughout the world. We have a proven track record of successful project delivery in projects ranging from West Africa through to West of Ireland. Our services include:

- Resource evaluation and CPR for both conventional and unconventional resources
- Transaction support and due diligence, both subsurface and environmental
- Geological and geophysical evaluation, from basin through to prospect and development
- Geophysical and geological operations support
- EIA, social engagement, permitting, planning and consenting
- Oil-spill contingency planning, including specialist waste management expertise
- Site remediation and restoration
- Water management.

Our global operational centres allow us to support operations throughout Europe, Africa, Australasia, Canada, the Lower 48 USA and the Arctic. Our business model facilitates providing the best skilled staff to the client site independent of geography.

Services to Governments

Our knowledge of the global exploration community and basin potential enables SLR to advise governments on strategies to maximise the value of their own hydrocarbon endowment. As with companies, our service is based on establishing a confident understanding of the resource potential including risks and economics. We can inform both national energy strategy and economic policy to attract the industry to invest.
The Arctic and Cold Region Sector

The Challenge

As interest increases in Arctic resource development, traditional exploration and development practices need to be adapted to create a sustainable business with respect to cultural compatibility, environmental impact and project economics. The Arctic presents unique challenges in terms of harsh weather, sea ice, short winter daylight hours, distance from infrastructure, and communities unaccustomed to nearby large developments with the associated industrial activity.

The SLR Approach

SLR is unique in providing a range of consulting services to the industry focused on maintaining the fine balance between developing hydrocarbon resources and protecting the fragile Arctic environment. The Arctic requires special expertise to avoid long-term impacts and we have a range of services targeted at minimising the impact of hydrocarbon exploitation. These include:

- We have obtained permits for no-impact winter exploration programmes that leave no visible impact except at the wellhead.
- Pristine air is a valued attribute of the Arctic. SLR helps its clients characterise the air quality and ensures that pristine air is maintained. To verify, we operate a series of air monitoring stations for our clients across the Chukchi and Beaufort Sea coasts.
- Water is a valuable resource in the Arctic and SLR helps its clients identify fresh water sources and extract the water with minimal impact on fish and other aquatic species.
- SLR is a leading consultancy in Arctic oil spill prevention and response planning. We help our clients prevent spills through proper design, construction, operations, maintenance and inspections. We also develop state-of-the-art response plans and help our clients undertake exercises and staff their incident response teams.
- Facilities closure planning takes on extra importance in the Arctic where rehabilitation of the natural environment is a slow process. SLR has been supporting facilities closure on the Alaska North Slope where clients are removing abandoned roads and pads, and re-vegetating to restore the tundra to a natural state.

Our Anchorage and Fairbanks offices support all operations in Alaska and provide a deep pool of expertise to underpin our consultants based in Canada and Northern Europe. Our global business model facilitates providing the best skilled staff to the client site independent of geography.
Unconventional Oil and Gas

Producing unconventional natural gas and oil has become a vital source of energy. While minimising environmental impacts is a high priority, the combination of rapid development of the industry and a few highly publicised environmental issues has lead to public opposition. These activities occur in geographic areas that have not previously experienced oil or gas development and the perceived or actual risk needs to be managed. SLR’s expertise in efficiently navigating these challenges helps our clients to obtain both regulatory and social approval for their projects.

SLR has teams working in each of the active unconventional resource plays in the US, UK, Canada, Australia and Ireland. Within these basins we combine niche environmental expertise (for example air quality monitoring, acoustics and social engagement) into a complete environmental service offering. Our global reach enables us to provide on site teams with both the technical knowledge and understanding of the local conditions. This expertise can facilitate companies wishing to enter the emerging unconventional provinces in Europe and Southern Africa where we have strong environmental and permitting background from other sectors.

In addition to the core services listed above, SLR has market leading expertise in niche disciplines that are proving critical to successful unconventional gas operations. In particular we provide data to support the industry’s efforts to win social acceptance to unconventional hydrocarbon exploration and production. These services include:

- Permitting and consenting
- Noise and vibration
- Ecology, biodiversity and cultural heritage implications of unconventional oil and gas development
- Water Management including abstraction, management of produced and flowback water including water treatment, disposal and company/regulatory reporting
- Air quality assessments and reporting, fugitive gas emission studies.

Natural Gas

SLR provides services in enabling companies to move gas to market. The integration of gas production through pipeline networks, LNG and on to market is vital to monetising gas resources. SLR combines a technical knowledge of the gas business with infrastructure planning and regulations to support companies through the complex gas to market decision making process. Although our service is applicable to mature gas producing basins, we have specialist understanding of bringing new, particularly unconventional, gas resources into mature consumer markets.

Our services include:

- Assessment of overall conventional and unconventional gas market development scenarios including supply- and demand-side assessments
- Strategic options for marketing gas including electricity generation, pipeline to gas grids and/or industrial consumption and LNG related infrastructure planning and environmental assessment
- Assistance in environmental permitting and planning of underground gas storage facilities
- Planning and consenting for gas gathering systems and associated infrastructure
- Assessment of Underground Coal Gasification projects including resource assessments, drilling site location siting, environmental and consenting implications of project development and market assessments for syngas.
Water Services

The management of water and related issues is a key component of SLR’s consulting business. We provide support and advice across the whole spectrum of oil and gas clients and service requirements – from operational sewage treatment to millions of cubic metres per day, oil production or shale gas water management systems and from permitting and planning advice to detailed design, plant operation and management and troubleshooting.

Our services encompass the complete water cycle from sourcing, through treatment to disposal. We have a multidisciplinary team of hydro-geologists, environmental specialists and process engineers. These water skills are a core part of our services to conventional and unconventional resources companies.

SLR’s water services include:

- Hydrology and hydrogeology studies
- Water quality monitoring and environmental base lines studies
- Technical and commercial feasibility studies
- Options appraisal
- Outline and detailed design specifications
- Tender preparation and procurement services
- Design development and construction project management
- Commissioning and performance specification
- Operations and maintenance management
- System and process trouble shooting
- Waste water treatment
- Produced water management and treatment
- Storm water treatment

Our in depth technical expertise in the water cycle outlined here enables us to apply SLR’s environmental services in a focused and effective way. Environmental compliance, permitting and monitoring form a key part to our services to manage the water element of any oil and gas operation.
SLR is a world leader in oil spill prevention, response and waste management planning. SLR has received international acclaim for its oil spill prevention and response plans in environmentally sensitive offshore exploration basins such as Alaska. Our professionals have been preparing and continually improving these plans for E&P, pipeline, tanker, and terminal operating companies large and small for more than 20 years.

The key to effective spill risk management is prevention. The most effective time to develop strategies is long before a spill ever occurs, when due consideration can be given to all eventualities and scenarios. We understand E&P, both offshore and onshore, and the latest technical and operational methods for oil spill prevention. However, establishing effective prevention measures will not be sufficient to persuade all of the community that development should go ahead. We help our clients show that they are prepared for the worst case. Our professionals develop plans that employ the latest response strategies, and recent developments in alternative clean-up methods, waste processing, including the extraction of energy from the waste. Thus, our clients can demonstrate that they can respond to a spill, no matter how remote the possibility, keep the spill from spreading, and clean it up back to baseline conditions.

The management of oil waste generated by clean up activities is an important aspect of spill response planning. SLR is a leader in strategies to manage this waste and identify the best means of treatment or disposal. SLR has developed a unique approach to the formulation of pre-incident plans, which include quantification of waste arisings and the modelling of their management and disposal. These plans are drafted in such a way that they can be easily updated and refined in the unlikely event of an incident.

SLR was retained some years ago to develop a decision making guide for the UK’s Maritime and Coastguard Agency to assist those developing plans addressing oily waste clean-up and disposal from UK beaches. Since then SLR has been actively engaged in further developments and has recently been retained by industry-wide groups to develop a framework and templates for oil spill waste management plans and standardise best practices in oil spill waste disposal on the UKCS.

SLR provides a comprehensive range of services to assist in the management of the waste which is inevitably generated as a result of oil and gas exploration, production, transfer, storage, refining and distribution.

SLR can offer both strategic and project-based advice in this area. Strategic advice and support can assist operators through helping them to develop corporate policy and internal processes to assess their options on a case-by-case basis.

Project-based services relate to the application of our skills and experience to characterise and quantify, then consider and assess all the options available for management, processing, treatment and disposal of all waste streams. We have a strong waste strategy team who have optimised strategies for the management of waste from such diverse situations as the London Olympics to the Island of Malta. Our process engineering team has undertaken over 100 due diligence assessments of waste processing technologies and systems and so we are completely familiar with all of the treatment options – both those in regular use and those still in development. Once a strategy has been agreed, we can undertake system design, engineering, contractor selection and contract management through to commissioning and performance verification and monitoring.

In addition to planning and project support, SLR can also offer operational support such as audit of existing waste management arrangements and compliance monitoring.
Asset Decommissioning

Against a backdrop of numerous mature fields and aging assets that will require safe and environmentally responsible decommissioning, deconstruction and removal (for reuse, recycling or disposal), the decommissioning sector is an expanding arena of activity (in the UKCS and also internationally) with a multi-billion total value forecast by the industry over the next few years.

Already active in this field, SLR offers a range of specialist skills that can support asset owners/operators and their major contractors and partners to successfully plan, permit, implement, monitor, and document the various phases of the decommissioning process.

Decommissioning activities are generally grouped into three main phases – Planning, Implementation and Monitoring. SLR staff have specialist expertise across all three phases including:

- Preparation of Decommissioning Plans/programmes
- Offshore strategic options assessment
- Environmental Impact Assessments/Environmental Statements
- Socio-economic impacts studies, Social licence to operate, stakeholder engagement and management
- Environmental permits, licences and consents; Oil Pollution Emergency Plans; Advice and support with regulatory compliance
- Waste inventory development and characterisation studies, waste management strategy, options review and planning; Hazardous, non-hazardous and liquid waste management (including NORM); Auditing
- Decommissioning contracts: specifications, procurement and management; Contractor management, performance and compliance auditing
- External review/peer review of draft plans.
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