



Shell staff member meets with a local resident in Shell's Appalachia operations in Pennsylvania, USA.

SHELL ONSHORE OPERATING PRINCIPLES IN ACTION: COMMUNITY ENGAGEMENT FACT SHEET

Shales continue to play an important role in meeting global energy demand. Shell's Shales business uses advanced technologies, including hydraulic fracturing, to unlock these resources safely and responsibly.

Today our shale operations are focused on six assets. We uphold five global principles, the Onshore Operating Principles, which govern the onshore shale (oil and gas) activities where we operate and where hydraulic fracturing is used. The principles cover safety, air quality, water protection and usage, land use and engagement with local communities. We review our Onshore Operating Principles annually and update them as new technologies,

opportunities, challenges and regulatory requirements emerge. In 2016 we updated the Principles to include how we manage any potential induced seismic events from our produced water disposal wells or hydraulic fracturing activities. We are transparent in our activities and actively engage with communities, regulators, industry participants and other stakeholders to bring about improvements in the sector.

1 Royal Dutch Shell plc and its various subsidiaries and affiliates (the "Shell Group") are separate legal entities. In this Fact Sheet the expression "Shell" is sometimes used for convenience where references are made to those entities individually or collectively. Likewise, the words "we", "us" and "our" are also used to refer to companies in the Shell Group in general or those who work for them, and these references do not reflect the operational or corporate structure of, or the relationship between, entities in the Shell Group. Nothing in this Fact Sheet is intended to suggest that any entity in the Shell Group, including Royal Dutch Shell plc, directs or is responsible for the day-to-day operations of any other entity in the Shell Group.

Community Engagement

Impact

The shale industry creates significant economic benefits in terms of economic growth, job generation, consumer savings, and government revenue. According to a Harvard Business School and Boston Consulting Study, shale development contributes more than \$430 billion to annual GDP in the USA and supports more than 2.7 million American jobs, ranging from those in exploration and production to supporting industries and local services.² The shale industry has helped turn struggling regions of the USA, including North Dakota, North-Central and Western Pennsylvania, Eastern Ohio, Oklahoma, and West Texas, into newly thriving communities. That said, we recognize that communities may also have concerns around potential socio-economic and environmental impacts around shales. While some impacts are unavoidable, we believe we can mitigate impacts to as low as reasonably practicable and explore, develop and produce shale resources safely and responsibly. Our engagement with the communities is essential to identifying how we might impact people and to helping us design and apply impact monitoring and mitigation measures.

Shell approach

We have a fundamental belief that our success working with neighboring communities flows from our efforts to be inclusive and to seek solutions that works best for everyone. We build relationships and engage with a broad range of stakeholders across the entire project life cycle from development to land restoration. Our stakeholders include residents, local communities – including indigenous populations – government officials, non-governmental organizations (NGOs), civil society groups, academia and industry. We focus our engagements on understanding local socio-economic conditions, identifying local concerns and proactively responding to those concerns. We also work with communities to help develop local economies. We are open to stakeholder feedback on how we engage and how we operate. Each of our shale operations has dedicated professionals in place to lead our stakeholder engagement, non-technical risk management and social performance activities and investment.



Shell's Appalachia operations are located in rural Pennsylvania, USA.

New projects

We assess and understand the impacts of our new shale projects and development plans on the social, economic and environmental aspects of neighboring communities. Our impact assessments provide a comprehensive overview of the social landscape in our proposed operational area and identify potential impacts. At every review stage of the project, we consider impacts identified by our assessments and decide whether and how best to move ahead. For example, in Canada, we have closely engaged First Nation groups to understand traditional land use areas and to help avoid disturbing culturally sensitive areas. Our projects must be designed and implemented to minimize impacts, provide shared value and enhance our relationships. We put in place management plans to reduce impacts identified by the assessment to as low as reasonably practicable. In some cases, we may revise our project plans based on the finding of the impact assessment. We continue close engagement and review impact assessments throughout the entire project lifecycle. We comply with applicable regulations that set out consultations requirements.

² Michael E. Porter, David S. Gee, and Gregory J. Pope, *Americas Unconventional Energy Opportunity: Win-Win Plan for the Economy, the Environment, and a Low-Carbon, Clean Energy Future*, <http://www.hbs.edu/competitiveness/Documents/america-unconventional-energy-opportunity.pdf>

Community Engagement

Operations

During exploration, drilling and production operations, we closely engage neighboring communities to understand their needs, expectations and concerns, and continuously look for ways to strengthen our relationships with our communities. We put in place integrated stakeholder engagement, non-technical risk management and social performance and social investment plans for each of our operations. We use a variety of engagement means to ensure that we are interacting with local communities in ways that make sense for them. This may include formal open-house meetings, newsletters, community advisory groups and opinion surveys. Moreover, we employ dedicated community relations professionals to regularly interact with community members. Our community relations professionals actively seek feedback and bring back concerns to the business for discussion and mitigation. Community members can also reach us using dedicated telephone lines, which feed into our Community Feedback Mechanism. This tool is designed to allow communities to have access to remedies in instances where our operations impact their livelihood or well-being. An internal procedure is activated to respond and resolve community issues, whether real or perceived. We also engage government officials regularly and seek inputs into our development plans. We have a system in place to help track commitments we make to our stakeholders.

COMMUNITY

Shell engages with local communities regarding socio-economic impacts that may arise from its operations.



Economic benefits

In addition to managing impacts, we support local development initiatives in our operational areas and aspire to bring sustainable economic benefits to neighboring communities. For example, at our Fox Creek operations in north-western Alberta (Canada), Shell has donated \$25,000 toward the Town of Fox Creek's Community Comprehensive Plan (CCP). This plan sets out a long-term vision for development and growth in Fox Creek. Shell has also donated \$40,000 to the Fox Creek Employment Centre to support local youth programs. Moreover, we assess local labor markets and pursue opportunities to train and recruit staff locally where possible. We also pursue opportunities to maintain a local business presence for our development and production operations where possible. We work to understand the local supplier base and contracting capabilities, and provide opportunities to qualified, competitive local suppliers. For example, at our Groundbirch operations in north-eastern British Columbia (BC) (Canada), Shell has contributed to the local economy by working with the Northern Lights College and the North East Native Advancing Society (NENAS) on skill development and training programs, providing apprenticeship positions for locals and using local contractors and Indigenous-owned businesses.

Social benefits

We identify local opportunities for social investment contributions and partnerships. Over the past two years, we have invested more than \$3.5 million in social investment projects across our shale operations in North America. Each of our operations designs its own social investment plans based on the local circumstances. However, in line with Shell's social investment priorities, we have focused our efforts on four areas:

- Education, including STEM (science, technology, engineering and math);
- Workforce and community development;
- Road safety;
- Environmental conservation.

STEM EDUCATION

Shell supports a range of STEM related activities in Pennsylvania (USA), where its Appalachia shale operations are located.

In 2017, Shell has spent over \$115,000 in multi-year STEM related activities in Pennsylvania. We believe this is invaluable investment into the local youth and our future workforce in Appalachia. We conducted a teacher and administrator survey of STEM needs in local school districts in our operational area. Based on the survey, we provided professional development to 30 teachers. Shell sponsors the Carnegie Science Center, which will conduct STEM education visits to local school districts

in Potter and Tioga Counties. Carnegie will bring in a mobile “Fab lab” for hands-on learning on 3D printers, laser cutters and other cutting-edge technologies. In 2017, we also provided funding to Coudersport School District to bring in mobile “Ag Lab” — a mobile agriculture education science lab equipped with all supplies and staffed by a certified teacher – to four schools in Appalachia. Shell also sponsors the Pennsylvania Envirothon, which is designed to cultivate a desire among youth to learn more about the environment through competitive events, a Mobile Energy Education Unit, Junior Achievement Careers in Energy and a Southern Tioga School District STEM Camp.

ROAD SAFETY

Shell has taken a proactive stand in improving road safety in the Permian Basin in West Texas (USA).

The 2014-15 boom in oil and gas production in the Permian Basin led to an influx in traffic, serious road traffic accidents and resulting fatalities. In 2015, over 200 people were killed in road traffic accidents across the 15 counties covering the Permian Basin – this constituted 33% of all fatalities reported in Texas, which has a total of 254 counties. As a result, road safety became a major safety emphasis for Shell, the entire oil and gas industry and local communities in the Basin. In June 2015, Shell played a leading role in bringing together a multi-stakeholder

coalition, called Permian Road Safety Coalition (PRSC), to improve road safety in the Permian Basin. Over the past two and a half years, the coalition has relentlessly advocated improvements to road infrastructure, signage and rules, raised money to improve the road infrastructure, build an industry community focused on road safety, established industry best practices on road safety, created a space for government and industry to work together and rolled out a public education and awareness campaign. Over the past two years, the number of fatalities has started to go down and the PRSC has contributed to this reduction. In 2017, 189 people were killed in road traffic accidents across the 15 counties.

ENVIRONMENTAL CONSERVATION

Shell is involved in conservation projects in West Texas (USA), where its Permian shale operations are located.

In 2017, Shell along with six other oil and gas companies formed a partnership with the National Fish and Wildlife Foundation with the aim of conserving the Pecos Watershed in Texas and New Mexico. The Pecos Watershed Conservation Initiative will work closely with government agencies, NGOs and civil society groups to identify conservation opportunities. The Pecos Watershed is a unique and extraordinary resource. Several iconic rivers in the Southwest, including the Rio Grande, Colorado, Pecos, Gila and San Juan, wind their way through the arid landscapes. These rivers are the lifeblood of the region and

provide critical resources for both local communities and wildlife. As human population and development increase, the demands on watersheds also increase, requiring urgent conservation action. The Pecos Watershed Conservation Initiative will solicit, review and award competitive grants to conservation projects, focusing on science-based and cost-effective conservation strategies for wildlife and habitat in the region. Our conservation efforts in West Texas are focused on strengthening the health of existing habitats, improving the management and function of native grasslands, addressing water quality and scarcity and identifying opportunities to re-establish species or bolster small remnant populations.

Community Engagement

Community feedback

We have a Community Feedback Mechanism in place at all our shales sites, which enables us to identify, record and resolve community concerns quickly and transparently, and to track our performance. We use the data as a performance indicator at both the local and global levels. Complaints are recorded and consolidated on a quarterly basis to track performance of complaint management in a timely manner. Quarterly reports

are cascaded to Shell's Social Performance leadership and further on to the business leadership as appropriate. Community concerns are also reported in the annual sustainability report. Our community relations professionals follow up on each complaint and we have a commitment tracker in place. While the number of complaints remains at a low level, communities are utilizing our Feedback Mechanism to express their concerns.

COMMUNITY ENGAGEMENT

Shell has played a leading role in bringing industry and communities together in Canada.

Community Partners is a program developed by industry representatives with strong support and advocacy from Shell to improve how oil and gas companies engage communities in western Canada. While the program was launched over a decade ago, it is still running strong. The program is supported by seven major oil and gas industry associations and include approximately 40 exploration, production, service, supply and manufacturing companies. Feedback from local

communities continues to help focus the program's efforts on three key areas: communication with residents, community livability and environmental protection. It is based on the idea that everyone's behavior matters and that respect in the community is part of everyone's job. For example, participating companies must control dust and speed, minimize litter and limit vehicle noise on rural roads. At Shell, we translate the Community Partners program into our everyday operations and make sure all our staff members are committed to following the key principles.

Breakdown of feedback

As per our Community Feedback Mechanism data, the largest number of feedback relate to potential social and environmental issues across our shale operations. Most social feedback is related to concerns around land access, management or use, leasing and royalties and property damage. Meanwhile, most environmental feedback is related to nuisances, such as noise and dust. We also receive feedback about road safety and traffic congestion. Data analysis helps us focus our community engagement efforts and, when appropriate, adjust our operations. The

number and nature of feedback is often related to the nature of operational activities in each our sites. For example, nuisance complaints typically increase during active drilling and completions operations. Appropriate with the local circumstances, we have dedicated programs in place for our shale operations to manage social and environmental impacts of our operations. Our external relations managers and community relations professionals work in close cooperation with the business to proactively mitigate impacts and respond to any concerns.

Community Engagement

Land access, management, use and leasing

We engage land owners across the entire life cycle of a project, briefing them on our development plans and operations, seeking their input and listening to their concerns. We make ourselves available for land owners through open-house meetings and attend a variety of local meetings and events where land owners are likely to be present. We often have a large number of land owners – some private and some institutional – with different size acreage and different socioeconomic footprint. Hence, landowners have different needs, expectations and concerns. We listen to landowners and adjust our operations as appropriate.

Nuisances

We recognize that our operations, especially drilling activities, can sometimes cause a range of nuisances, such as increased light and noise. Our drilling activities are temporary in nature, lasting a few months, but we closely engage communities during these activities and make every effort to minimize impacts. We design our facilities and operations in a way that is appropriate for the local conditions and limit nuisances to as low as reasonably practicable. To mitigate impacts of light, we may consider adjusting the positioning and direction of lights as well as using hoods around lighting. For example, at our Permian operations in West Texas (USA), we have changed lighting and pointed lighting down to reduce the cumulative impacts of lighting in the Permian Basin, which is located near the McDonald Observatory in West Texas. To mitigate noise, we may consider putting in place physical noise control measures, such as berms and walls, around our operational areas as well as restricting some activities to daytime hours only. As appropriate, we may also deploy monitoring equipment and take readings of sound levels. We also try to minimize visual disturbance on the landscape through smart positioning of rigs and wells.



Shell staff member meets with local land owners near Shell Groundbirch operations in northeast British Columbia, Canada.

Road safety

We deploy In-Vehicle Monitoring Systems (IVMS) in all our vehicles and long-term rental vehicles. The system tracks several driver behaviors, such as speed, harsh braking, rapid acceleration and use of seatbelts and his/her routes. It triggers verbal coaching to the driver in the moment as an immediate coaching tool and generates reports for supervision. Supervisors have the opportunity to review driver reports weekly (but at a minimum monthly) basis to provide drivers with feedback, coaching and recognition. Drivers consistently showing poor driving behavior may find themselves in a consequence management process. We actively engage our contractors on Shell's road safety standards, incident sharing and best practices. We strictly enforce speed limits among our staff and contractors in our operational areas. We also work to improve road safety in the communities where we operate. The Permian Road Safety Coalition (PRSC), discussed above, is an example of Shell-driven public-private partnership initiative.

Community Engagement

ROAD SAFETY

Shell has brought multiple stakeholder together in Northeast British Columbia and Northwest Alberta to improve road safety.

In late 2017, Shell formed the Northwest Alberta Road Safety Coalition to promote road safety within Northeast British Columbia (Peace Country) and Northwest Alberta (Greenview). The Coalition is comprised of like-minded partners, such as local municipal governments, emergency services, oil and gas operators, pipeline companies and forestry companies, as well as other road users who share our safety goals. The coalition has identified an urgent

need to improve road safety especially along Highways 40 and 43, which have seen an increasing number of fatal accidents and are hot spots for emergency services. It has held public meetings to understand stakeholder concerns and opportunities for improvements. The coalition is focused on improving driver behavior and education, road infrastructure and analytics, and public awareness. It also works with the provincial government to put in place better signage, establish passing lanes, eliminate blind corners and widen shoulders for motorists and law enforcement to pull over.

Traffic congestion

We recognize that our operations can cause inconvenience related to traffic as well as create road safety concerns among neighboring communities. We assess the local conditions and put in place fit-for-purpose measures to address these concerns. These measures may include use of alternative transportation methods, utilizing less congested transportation routes and adjusting activity schedules

and transportation timings. For example, in some of our operations, we avoid transporting supplies and equipment during school bus hours. At our Permian operations in West Texas (USA), we have invested in pipelines, central production facilities and water recycling, which has significantly reduced our truck transport requirements and traffic within the community.

ADDITIONAL RESOURCES

- API – Community Engagement Guidelines: www.api.org/oil-and-natural-gas/wells-to-consumer/exploration-and-production/hydraulic-fracturing/community-engagement-guidelines
- Americas Unconventional Energy Opportunity: Win-Win Plan for the Economy, the Environment, and a Low-Carbon, Clean Energy Future: www.hbs.edu/competitiveness/Documents/america-unconventional-energy-opportunity.pdf
- Rational Middle/Realities of Drilling: Extended and Recut: rationalmiddle.com/energy/movie/realities-of-drilling-extended-and-recut/
- Life of an onshore well: finding and producing tight or shale oil and gas | Shell Natural Gas: www.youtube.com/watch?v=w9MMsEkaGw