

Providing Energy Security for America

Background

The Strategic Petroleum Reserve (SPR) is the world's largest supply of emergency crude oil. Administered by the U.S. Department of Energy (DOE), these federally-owned oil stocks are stored in massive underground salt caverns along the Texas and Louisiana coastlines of the Gulf of Mexico.

History

President Gerald Ford established the SPR in 1975 after the Organization of Arab Petroleum Exporting Countries (OAPEC) imposed an oil embargo against the United States, triggering an energy crisis that sent the U.S. economy into a recession. To mitigate damage from any future shortages of oil, DOE acquired several existing salt caverns along the Gulf of Mexico to serve as the first storage sites in 1977.

Mission

The SPR's purpose is to protect the U.S. economy from severe petroleum supply interruptions through the acquisition, storage, distribution, and management of emergency petroleum stocks. It further serves to fulfill U.S. obligations under the International Energy Program (IEP). The IEP, a treaty in which the United States is a signatory, requires member countries to hold in reserve the equivalent of 90 days of net imports of oil and petroleum products.

Benefits

In the event of a commercial oil supply disruption, the United States can turn to the SPR. These emergency stockpiles of crude oil are used to combat the potential market effects of both domestic and international disruptions caused by weather, natural disasters, labor



strikes, technical failures/accidents, political disputes, or conflicts. The United States can also fill the SPR during times of demand destruction or oversupply to reduce shut in of U.S. oil production.

Management

The Deputy Assistant Secretary of the Office of Petroleum Reserves (OPR), located in Washington, D.C., has overall program responsibility for carrying out the mission of the SPR and for monitoring the SPR's operational readiness capability. The day-to-day operations for the SPR are managed by the SPR Project Management Office (PMO), located in New Orleans, LA. As of March 2020, OPR and the SPR PMO is made up of 110 Federal employees and over 900 contractor employees.

Size

The SPR comprises 60 salt caverns. Each cavern is cylindrical in shape with an average diameter of about 200 feet and a height of 2,550 feet, which is large enough for Chicago's Willis Tower to fit inside with room to spare. With a storage capacity of up to 713.5 million barrels, the SPR currently holds in excess of 600 million barrels of crude oil. That amount of crude oil, refined into gasoline, could fill over 1.3 billion large sedans.

Use

In the event of a global or domestic supply disruption, the SPR can provide help to the U.S. economy through Presidential authorization by offering either a crude oil sale or exchange (i.e., a temporary loan of crude oil). The SPR can also be an option for U.S. oil producers to store crude oil when the demand drops dramatically, as it did in 2020 amid the Coronavirus pandemic. Storing crude oil in the SPR helps to alleviate the pressure on crude oil producers to shut in oil production. Thus, the SPR is a powerful tool U.S. leaders can use to respond to a wide range of crises involving crude oil disruption or demand loss.

Decisions to withdraw crude oil from the SPR are made by the President under the authority of the Energy Policy and Conservation Act. Generally, this will be done through a competitive sale. Additionally, the Secretary of Energy may authorize a limited release in the form of a test sale of up to 5 million barrels. The Secretary may also authorize exchanges, or a crude oil loan, with non-governmental entities. During an exchange, the Department may distribute SPR crude oil, for example, during a localized disruption through an exchange agreement, which takes only a few days to complete. The Department may also conduct a storage exchange and fill the SPR through a Request for Proposals process. In either case, winning bidders leave a small premium of oil to cover the SPR's costs.

Storage

More than 500 salt domes are concentrated along the Gulf Coast. Storage in salt formations provides safety and security, prevents evaporation or air emissions, offers low construction cost (1/5 of conventional surface tanks), and low operating costs. Additionally, many U.S. refineries and distribution points for tankers, barges, and pipelines are located along the Gulf Coast and that proximity provides maximum flexibility to respond to supply interruptions.

Distribution

The SPR is always drawdown ready, which means it stands ready to release crude oil to the market within 13 days of Presidential direction; that's how long it takes to conduct the sale/exchange process, award contracts, and to arrange the logistics for oil transportation. The SPR can distribute its oil to nearly half of all U.S. oil refineries using available interstate pipelines or barges.

Centrally located along the Gulf Coast, the SPR connects by pipeline to 29 Gulf Coast refineries and 6 Midwest refineries, and is connected to 4 marine terminals, which makes shipping by ocean-going oil tankers feasible.

For more information on the SPR, visit fossil.energy.gov.

Last updated: April 2020