



National Oil Shale Association

Oil Shale
Energy to Fuel our Future

Frequently Asked Questions

WHAT IS OIL SHALE?

Oil Shale is a mineral resource that produces petroleum-based fuels we use in our automobiles, jet planes and trucks. It is found in many places in the world but the largest deposits are found in the United States. The three states of Colorado, Utah and Wyoming contain an amount of shale oil that is comparable with the conventional oil reserves in the Middle East.

IS OIL SHALE NEEDED?

Yes, in today's world of rising gasoline prices and peaking oil production, oil shale is an important mineral resource for our nation's energy security. It is one of the few domestic energy sources that can reduce dependence on foreign oil supplies.

HOW IS OIL SHALE MADE INTO TRANSPORTATION FUELS?

Unlike conventional petroleum, oil shale cannot be directly pumped from the ground. It is a solid that must be heated to produce crude shale oil. This heating can be accomplished by mining the oil shale and processing it on the surface or by using underground methods known as insitu recovery. Crude shale oil is then upgraded to remove certain impurities, such as nitrogen, and then processed in an oil refinery to produce gasoline, diesel and jet fuel.



WHY ARE WE NOT PRODUCING SHALE OIL NOW?

Converting oil shale into products is currently more expensive than pumping petroleum from the ground. Attempts to build commercial oil shale plants in the last century were suspended when the price of petroleum plummeted. With prices rising and technology advancing, the prospects for success have improved. Industry is conducting research to try to develop projects that will be economic, environmentally acceptable and socially sustainable. The U.S. Department of Energy has estimated that commercial projects could come on line in the next decade if research results are positive and industry finds the investment risks acceptable.

ARE THERE ENVIRONMENTAL ISSUES RELATED TO OIL SHALE?

Yes, as there are with all human endeavors, but they are believed to be manageable with current technology. Research efforts are determining the levels of water, air, climate change, land use, wildlife and other impacts. With this information in hand solutions can be demonstrated that will meet regulatory standards and public expectations.

HOW WILL OIL SHALE DEVELOPMENT AFFECT LOCAL COMMUNITIES?

In the near term there will be little effect on communities because research work does not require large labor forces. When commercial projects are initiated there will be an increase in population and there will be both positive and negative influences for communities. Jobs, new businesses and tax revenues will bring positive effects. The stresses of growing populations will bring adverse effects that industry and governments will plan for in a cooperative manner. The net effect for our nation will be positive because of the pressing need to become less dependent on foreign oil supplies.

IS OIL SHALE AN EFFICIENT ENERGY RESOURCE?

Yes, because more energy in the form of oil and gas can be obtained from it than is used to produce it. Depending on the process used, oil shale can yield more than three units of energy for every unit of energy consumed.