OIL SHALE FACTS AND FICTION

NATIONAL OIL SHALE ASSOCIATION

The following is presented to clarify some misconceptions about oil shale.

FICTION: We don't need oil shale. We can just use renewables and non-fossil fuel alternatives to meet our future energy needs.

FACT: During the next 50 to 100+ years the United States will need a secure domestic supply of hydrocarbon fuels especially for airline travel and ground transportation. The demand for gasoline, diesel and jet fuels will continue to increase and domestic supplies of conventional petroleum are declining. Even with increased conservation and fuel substitution, the percentage of petroleum imported from outside our borders will not decline appreciably. Growing worldwide demand will result in higher fuel prices, shortages of world supplies and political instability. Oil shale is one of the domestic bridge fuel supplies that can see the nation through to a society less dependent upon foreign fossil fuels.

FICTION: Oil shale development is moving ahead too quickly. It must be slowed down by stopping work on the commercial leasing. Regulations are not needed because a commercial industry will not emerge for many years.

FACT: Oil shale development is moving at a slow and deliberate pace and not rushing to commercialization. Current research, development and demonstration programs are focused on answering important questions: 1. Will the technologies perform as expected, 2. Can commercial projects be profitable, 3. Can projects meet environmental regulations and perform in a responsible manner, and 4. How will socioeconomic concerns be solved? Projects are moving at different rates depending upon the status of the technology being employed and the technical and economic risks involved, but all are indicating that large scale commercial plants will not go into operation for at least a decade. However, today developers need to know the requirements for leasing federal oil shale resources in order to make informed investment decisions.

FICTION: Oil shale processing uses more energy than it produces. It would be better to process pop tarts or potatoes.

FACT: Net energy is created though the retorting of oil shale. Depending upon the technology employed and the richness of the resource, estimates range from a ratio of 3:1 to 6:1. The size, concentration and quality of the oil shale resource in the Western U.S. make it an ideal domestic source of gasoline, diesel and jet fuels.

FICTION: Oil shale development has too many health, wildlife and environmental unknowns, and it is too risky and dangerous, so commercial development must await completion of all research, development and demonstration.

FACT: The basic methods of producing oil and gas from oil shale are well known. Commercial oil shale projects have been in operation in Brazil, China, Estonia and other parts of the word for decades. Large-scale semi-commercial plants were operated in the United States in the 1960-80's. It is only the newer techniques under development that still need to be demonstrated. There is a wealth of knowledge that can be drawn upon by engineers and scientist. The ranges of technical, socioeconomic and environmental factors can also be established so the public and government officials can judge the impacts and benefits of development.

FICTION: There is not enough water available to support oil shale development in Colorado, Utah and Wyoming. Stream fisheries will be eliminated. Water will become too dangerous to drink because of contamination by elements like arsenic, boron and selenium.

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FACT: Water is needed for oil shale processing. The amount varies with technology but is in the range of 3 barrels of water per barrel of upgraded shale oil produced. Water is currently available within the upper Colorado River Basin to support a commercial industry, and many developers already have rights to use that water. However, a commercial oil shale industry would use only a small percentage of the water in the Basin. It would not dry up rivers or endanger fisheries as water use is strictly regulated by appropriate agencies. Water will be stored in reservoirs during the spring runoff for use during dry periods of the year. A no-discharge strategy will be employed wherein contaminated water will be treated and used internally, and contaminated water will not be returned to local water sheds.

FICTION: Shale oil is a dirty, inferior hydrocarbon fuel.

FACT: Oil shale deposits in the Western United States are the most concentrated hydrocarbon resource in the world. One ton of oil shale will produce 25 gallons or more of shale oil that can be refined into excellent gasoline, jet fuel, diesel and other petroleum products. The shale oil content in a ton of oil shale is greater than the oil contained in a ton of rock from a conventional oil reservoir. Production of shale oil can be conducted in a manner that meets or exceeds all environmental regulations.

FICTION: All the impacts of oil shale development are negative and so significant that it should not be allowed to develop.

FACT: An oil shale industry will provide numerous benefits to local communities, states, the Federal government and the general public. These benefits are realized through public sector revenue distribution (e.g. tax, royalty, use and license fee revenues for affected units of government); economic expansion and diversification (e.g. increased opportunities for local small businesses); long-term employment opportunities (e.g. high paying full time jobs in a sustainable industry); education and skill development; and fiscal support for infrastructure improvements (e.g. schools, hospitals, transportation and public services).

FICTION: There is no need to lease Federal oil shale lands since there are plenty of private oil shale lands.

FACT: Much of the highest quality oil shale resource in the world is under U.S. Federal ownership. It is this resource that has the best chance of supporting a first generation oil shale industry that is economic and sustainable. Therefore, it is in the interest of the nation to make this resource available to industry. The oil shale lands in private hands are either small tracts not amenable to commercial development or geologically less attractive for processing using the newer technologies now under development.

FICTION: There is no solution to dealing with greenhouse gases (GHG) produced from oil shale processing. Giant coal fired power plants required to support an oil shale industry will be large sources of GHG.

FACT: Greenhouse gases produced from oil shale processing can be captured, and put to beneficial use or sequestered. Techniques are under development by oil shale and other industrial firms to meet regulations when they are enacted. Not all technologies under development require large external sources of electric power. The gas produced during oil shale retorting is sufficient to supply the retorting energy needs of most processes. Electric power required for an oil shale industry can be generated from sources other than coal, such as co-generation, natural gas, solar or wind turbines.

FICTION: Spent shale is a hazardous material and blows-up like popcorn when produced.

FACT: Spent shale is not a hazardous material. A recent finding by the U.S. EPA confirms that conclusion. Spent shale embankments resulting from semi-commercial oil shale operations in the Western United States in the 1960-80's are stable landfills, support vegetation and have not contaminated surface or ground waters. Techniques developed in that era and experience from similar industries are planned to be demonstrated by current developers. Spent oil shale from aboveground processes does not expand like popcorn but does have a slightly larger volume than the original rock primarily because of voids introduced by grinding. There is no surface disturbance from spent shale disposal associated with in-situ oil shale processing because it remains in the ground.