Position Paper
Studies Misrepresent Future Oil Shale Impacts
National Oil Shale Association – April 2009

In the past year, there have been three studies released by Colorado entities that misrepresent the potential impacts of future oil shale development. While the path of oil shale development is unclear, the studies referenced below portray large-scale growth scenarios that are based on overstated assumptions, and yet have been used by state officials and others to create misleading perceptions about the impacts from future oil shale development.

1) ***Northwest Colorado Socioeconomic Analysis and Forecasts*, Associated Governments of Northwest Colorado (AGNC), April 2008, prepared by BBC.**

This report forecasts two growth scenarios in northwestern Colorado. The base case projects growth associated with the current level of natural gas drilling and development, and the second scenario is the base case plus oil shale development.

In their formal presentation, BBC stated, "oil shale breaks our model", meaning that there are not enough specifics known about future oil shale development in Colorado to use their model for predictions. So they simply assume that the population growth occurring with oil shale development will be the same as the growth that occurred in the remote area of Fort McMurray, Alberta, Canada as the tar sands were being developed.

NOSA Response

There is no basis to assume that the BBC projections would accurately portray the growth patterns that might occur in Colorado, or that oil shale development will require the same levels of employment as tar sands development.

Oil shale will develop incrementally and will have to meet all regulatory requirements as production levels increase over time. There is no assurance today that any significant shale oil production will be achieved, but studies such as this one tend to create public fear and may stymie the current efforts by industry to perfect technologies that can meet regulatory, economic and public expectations.

2) ***Energy Development Water Needs Assessment (Phase 1 Report)*, Colorado, Yampa and White River Basin Roundtables, September 2008, prepared by URS.**

This report contains three scenarios for future water needs of the energy industry, and bases its forecasts for population growth on the above-mentioned BBC socioeconomic study performed for AGNC. The base scenario forecasts no oil shale development. A second scenario is for a 150,000 barrel-per-day shale oil industry, and the large growth scenario is ten times larger, at 1,500,000 barrels-per-day of shale oil production by 2036.

NOSA Response

The *first problem with this study is it uses the population growth assumption of the AGNC study. The large growth scenario of 1.5 million barrels per day by 2036 is unrealistic. It is unlikely there will*

be any commercial oil shale production in Colorado before 2020, probably later, and to assume that in a 15-year period, the industry could conceivably be at 1.5 million barrels per day is unrealistic.

The second problem is the projection that a future oil shale industry will have a 5.3:1 water to shale oil consumption ratio, when all the existing evidence, studies, and expectations of the industry say that a 3:1 water ratio, or less, is generally expected. Much of the water used in the 5.3:1 ratio assumes coal-fired electric power will be needed by all technologies now under investigation for heating oil shale to recover shale oil. Actually, the mix of technologies that emerge may not require large amounts of electric power.

So, while this study projects industry consumption of nearly 400,000 acre-feet of water a year, a realistic large-case growth scenario would be half of that, or less.

3) ***Water on the Rocks – Oil Shale Water Rights in Colorado*****, Western Resource Advocates, March 2009**

Western Resource Advocates (WRA) is a nonprofit environmental law firm. The theme of this report is that the diversion of water to Colorado's front-range communities is a better use than using western slope water for oil shale development.

NOSA Response

In WRA's inventory of water rights held by energy companies, they overstate the amount of water held by "oil shale interests" by adding in the entire water right holdings of the Colorado River Water Conservation District and the Yellow Jacket Water Conservancy District. The report states that because some part of their holdings could conceivably be used for oil shale purposes, it is justified to add the entire holdings of both Districts to the inventory. In reality, none of these holdings are specifically intended or designated for oil shale development. WRA also includes numerous water rights in their total inventory that they acknowledge have been abandoned.

Because of these faulty assumptions, the report overstates the actual amount of rights held by energy companies by 74% in terms of flow, and by 187% in terms of reservoir storage capacity. This study also over projects water consumption, in barrels of water per barrel of shale oil, by citing the URS Phase I report.

Summary

None of the three reports assess the anticipated benefits of oil shale development, such as revenue distribution of royalties and taxes, economic development opportunities, and sustainable employment opportunities (including potentially filling the employment gap when gas drilling is completed).

While it is acknowledged that the future levels of shale oil production are not clear, the mischaracterization of oil shale's potential impacts only serves to unnecessarily heighten public anxiety. Realistically, this enormous domestic energy resource can play a role in reducing our reliance on foreign supplies of petroleum.