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In the fall of 2020, with NDIC funding, the EERC performed an evaluation of natural gas liquid (NGL) storage in artificially created subsurface salt caverns. The key goal of the effort was to evaluate locations in western North Dakota where infrastructure and required resources are colocated with salt formations that may be suitable candidates for NGL storage caverns. The ability to effectively store large volumes of NGLs is a prerequisite for petrochemical development, which could provide value-added products using North Dakota's produced gas. The initial results of the study suggest that the development of small caverns is achievable in North Dakota salt beds and that multiple caverns could be used as a viable design approach to support NGL storage. As is the case with produced gas storage, several areas of regulatory uncertainty were identified that could affect the development of salt cavern storage projects in North Dakota, and SB 2065 is addressing them.

In addition to addressing the regulatory uncertainty, the technical viability of salt cavern creation in North Dakota needs to be verified. While the salt caverns have been created along the Gulf Coast of the United States and in Alberta, Canada, no salt caverns have been created in the North Dakota portion of the Williston Basin. Sections 6 and 15 of SB 2014 would provide the resources necessary to drill into, and collect samples from, salt formations in North Dakota. The samples and logs collected from the target salt formations will allow the scientists and engineers at the EERC, along with our industry partners, to determine if salt caverns can be created in North Dakota. In addition, this study would also determine the size and capacity of individual salt caverns in targeted salt formations, with these results reported to NDIC. Ultimately, the option to create salt caverns in North Dakota for storage of hydrogen and NGLs will be necessary to attract the petrochemical and other industries to North Dakota. In addition to the creation of salt caverns for the petrochemical industry, the ability to economically store NGLs in the subsurface could facilitate Bakken oil production, reduce flaring, and support enhanced oil recovery and will provide economic and environmental benefits to the people of North Dakota and its industries.