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Comments: Comments on Consent to Lease for geothermal energy

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This consent to lease shows almost all of the area previously reviewed and available for leasing in the Mt. Baker area as no surface occupancy (NSO). Areas previously leased with exploration already completed including a temperature gradient well showed promise for development of geothermal energy, especially for Engineered Geothermal Systems (EGS) methods. There is a known hydrothermal resource in a fault system near Baker Hot Springs but this is most likely small and unlikely to be economic to develop. In addition any development of this hydrothermal system would likely disturb the hot springs,

While the previous Mt. Baker Geothermal Consent to Lease FINAL Environmental Assessment was completed in May, 2015 and updated in 2022 showed significant areas of NSO, there was sufficient area open to occupation that would provide for the possibility of geothermal development. The new consent to lease document has reduced the area available for geothermal development significantly despite the fact that little has changed since the 2015 EA was released.

It is clear that a large and potentially economic heat resource is present in the Mt. Baker area. This resource, while not included in the Geothermal Play-Fairway Analysis of Washington State Prospects: Final Report (Steely, 2021)(WPFA) since this report only considered naturally occurring hydrothermal resources, could be developed using EGS methods to extract the heat. Recent interest in large scale EGS development in the Mt. Baker area could help to provide baseload renewable energy to offset production of hydro power lost due to climate change. While it is reasonable to preclude development of the hydrothermal resource in the area of Baker Hot Springs due to the cultural significance of the area, development of the heat resource through EGS methods could be located outside the viewshed of the hot springs and neighboring campgrounds and would not disturb the plumbing of the hot springs. Data from the temperature gradient well drilled by Cyrq Energy shows a high geothermal gradient in the area to the southwest of the hot springs. While Cyrq returned the lease to the BLM after determining that they did not want to pursue this potential resource, this does not mean that there is not a high potential for development of this heat resource in the future.

The expansion of the area of NSO makes development of the EGS resource difficult if not impossible. Even though the heat resource can be accessed by directional drilling up to about 3 km away from the surface location, there are significant constraints on where the resource can be tapped that make these restrictions to surface disturbance very difficult for development. The recent state funded prefeasibility study of the Mt. Baker area relied on the 2015 consent to lease for the areas available for development. This encouraged both the Whatcom PUD and the Nooksack tribe to nominate lands in the areas with potential for EGS development which would be unlikely to be developed under the current consent to lease.

In the meantime, the Forest Service is actively repairing and maintaining logging roads and selling rights to log that disturb surface, the viewshed and may impact cultural resources all over the Mt. Baker Snoqualmie National Forest.