Intermountain Region

324 25th Street Ogden, UT 84401

United States Forest Department of Service Agriculture

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> File Code: 2770 Date: 0CT 2 0 2015

Kimberly D. Bose Secretary, Federal Energy Regulatory Commission 888 First Street, N.E. Washington, D.C. 20426

Re: **COMMENTS** of U.S. Forest Service on Cat Creek Energy Generation Pumped Storage Hydroelectric Project No. P-14655-000, Preliminary Permit Application by Cat Creek Energy, LLC.

Dear Ms. Bose:

The Forest Service, Intermountain Region and Boise National Forest, have reviewed the preliminary permit application of Cat Creek Energy, LLC (Applicant), for the proposed Cat Creek Energy Generation Pumped Storage Hydroelectric Project (P-14655-000). Detailed comments on both the proposed project and any preliminary investigations are provided in the attached enclosure.

The Applicant plans to conduct preliminary studies including geological studies. These studies could include subsurface investigation by core drilling, test pits, or other ground disturbing activities. Please note that any ground disturbing activities on National Forest System (NFS) land, even if considered minor by the Applicant, would require a special use authorization, issued by the Boise National Forest, Mountain Home Ranger District. Appropriate environmental analysis must be completed prior to issuance of special use authorizations. Issuance of a preliminary permit by the Federal Energy Regulatory Commission does not grant the Applicant authority to proceed with the proposed activities on NFS land.

Although the Forest Service does not object to issuance of a preliminary permit, the project proposal and any preliminary studies must be evaluated for compliance with the Boise National Forest Land and Resource Management Plan (Forest Plan). If this evaluation determines that the proposal or preliminary studies are not in compliance, the Forest Plan would need to be amended before studies could be done or the project could be constructed. The proposal has the potential to affect resources and is potentially incompatible or in direct conflict with existing management standards for this area.

If you have questions, please contact Dawn Alvarez, Inter-regional Hydropower Team, at 801-625-5435, or by email at dalvarez@fs.fed.us.

Sincerely,

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NORA B. RASURE Regional Forester

cc: FERC service list

USDA FOREST SERVICE, INTERMOUNTAIN REGION COMMENTS, PRELIMINARY PERMIT APPLICATION CAT CREEK ENERGY GENERATION FACILITY PUMPED STORATE HYDROELECTRIC PROJECT, NO. 14655-000 OCTOBER 2015

Proposal Summary

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Cat Creek Energy, LLC has filed an application for a preliminary permit with the Federal Energy Regulatory Commission, proposing to study the feasibility of the Cat Creek Energy Generation Facility Pumped Storage Hydroelectric Project (Project), which would be located at the U.S Bureau of Reclamation's (BOR) Anderson Ranch dam and reservoir on the South Fork of the Boise River near Mountain Home in Elmore County, Idaho. The Project would use the existing Anderson Ranch reservoir, and would consist of the following new facilities: (1) a 3.4-mile-long, 80-foot-high earthen dam; (2) a 38,000acre-foot impoundment as an upper reservoir; (3) two, 5,600-foot-long, 22-foot-diameter steel penstocks; (4) two, 100-foot-diameter concrete silos; (5) two, 200-megawatt vertical Francis turbines/generators; (6) an 8.0-mile-long, 230- kilovolt transmission line interconnecting with the existing Bonneville Power Administration Dixie Substation; (7) an approximately 3.6-mile-long access road; and (8) appurtenant facilities. Portions of the Project would be located on the Mountain Home Ranger District, Boise National Forest.

Law and Policy

The Forest Service must manage resources and follow management requirements enumerated in the Organic Administration Act of 1897 (30 State. 11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), the Wilderness Act of 1964, the Federal Land Policy and Management 20101020 DUOT INC IDI (ONOTITCIAI) IO/20/2010 J.IJ.IJ IN

Forest Service comments on Preliminary Permit Application for Cat Creek Energy Generation Pumped Storage Hydroelectric Project, P-14655

Act (90 Stat. 2743), and any other law specifically establishing a unit of the National Forest System (NFS) or prescribing the management thereof (such as the Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and direction, including but not limited to Forest Service Manual direction, Forest Service Handbook direction, and approved Land and Resource Management Plans prepared in accordance with the National Forest Management Act.

Boise National Forest Plan

The Boise National Land and Resource Management Plan (Forest Plan) guides all natural resource management activities and establishes management standards for the forest. The plan describes resource management practices, levels of resource production and management, and availability and suitability of lands for resource management. All activities on the Boise National Forest, including investigative work, are governed by the standards and guidelines of the Forest Plan, which includes both Forest-wide requirements and specific Management Area provisions that must be followed by the Forest Service and any entity permitted to conduct work on each Forest. Any project proposal must be evaluated for compliance with the Forest Plan.

If this evaluation determined that the proposal or preliminary studies were not in compliance, the Forest Plan would need to be amended before any studies could be done or the Project could be constructed. The Project has the potential to affect resources and is potentially incompatible or in direct conflict with existing management standards for this area.

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Prior to undertaking any entry or studies on NFS land pursuant to a preliminary permit, the Permittee must submit a proposal to the Forest Service authorized officer for the studies they plan to conduct on NFS land under the preliminary permit. Prior to the Permittee undertaking any of the proposed study activities, the Forest Service authorized officer must issue a special use authorization, unless the authorized officers waive the requirement under the provisions of 36 C.F.R. § 251.50 (d) or (e)(2009). The special use authorization will require, in part, compliance with Forest Service standards for fire prevention and control, prevention of damage to Federal property and natural resources, and repair or rehabilitation of any damage resulting from study activities.

Before the Forest Service can issue a special use authorization to the Permittee, it must analyze potential impacts, which includes consulting with the U.S. Fish and Wildlife Service (USFWS), an agency of the U.S. Department of Interior, on impacts to threatened and endangered species. Based on experience with other similar projects requiring consultation, this can take a substantial amount of time. As such, the Permittee should allow sufficient time for review, analysis, and consultation for any activities on NFS land.

The Forest Service does not object to the issuance of a preliminary permit. Should a preliminary permit be issued for this Project, the Forest Service offers the following resource-specific comments for the proponent to consider as they develop their Project application and conduct investigative or feasibility studies.

Botanical Resources

The proposed Project areas consist of non-forested and drier forest habitats which may have potential to support rare plant populations. The proponents would need to have field

surveys conducted for the plant species on the current Boise National Forest Rare Plant Lists prior to Project implementation, and ensure that activities complied with the *Management Direction for Threatened, Endangered, Proposed, and Candidate Species* and *Management Direction for Botanical Resources* as listed in the Forest Plan. The proponents would also need to get the current list of federally listed, proposed and candidate species from the USFWS.

Fisheries Resources

The Anderson Ranch Reservoir fisheries resource consists of rainbow trout, bull trout, whitefish, chinook salmon, kokanee salmon and smallmouth bass. South Fork Boise River below Anderson Ranch Reservoir is a Blue Ribbon fishery consisting of rainbow trout, bull trout, mountain whitefish and sculpin.

Threatened, Endangered and Sensitive Species (TES) and critical habitat -

Endangered Species Act

- Bull trout are listed as a threatened species (63 FR 31647 31674) under the Endangered Species Act.
- Anderson Ranch Reservoir up to full pool is designated critical habitat (75 FR 63898 64070) under the Endangered Species Act.
- South Fork Boise River below Anderson Ranch Reservoir is designated critical habitat (75 FR 63898 64070) under the Endangered Species Act.

Concerns

• Entrainment – bull trout and other species could be entrained when pumping water up to the holding basin.

- Temperature Increase in water temperature to Anderson Ranch Reservoir or the South Fork Boise River depending on the alternative considered and where water is released. The newly constructed dam would be a shallow reservoir and water temperatures would increase rapidly through solar radiation during hot summer months. An increase in water temperature could impact bull trout and could have effects on other fish resources within the reservoir.
- Sediment Increase in sediment from construction, maintenance and operation of hydroelectric facilities and associated power lines.
- Supersaturation Supersaturation occurs when air becomes trapped in water spilled over a dam as it hits the pool below. If too much nitrogen is absorbed in the bloodstream of fish, air bubbles form and create the equivalent of what dives call "the bends" and fish die.

Soil and Hydrological Resources

The NFS lands proposed for development are located on upland volcanic flow lands that drop steeply to deeply entrenched canyonlands, typical of the landforms that surround the southern end of Anderson Ranch reservoir. Slopes of the upland prairies average 5 to 10 percent, while the sideslopes adjacent to the reservoir range from 15 to 45 percent. The surface geology is primarily volcanic basalts; prairie upland soils have moderate surface erosion potential and moderate to high productivity; the canyonland slopes are mostly rock. Localized, dispersed impacts to soil and water resources include upland compaction, accelerated erosion and sediment, water diversions and stream channel modifications from roads, livestock grazing, wildfire, and recreation.

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The Project is proposed in the Evans Creek-South Fork Boise River hydrologic unit (HUC 170501130803); both subwatersheds are tributary to Anderson Ranch reservoir. The streams in these watersheds are currently designated 'full support' for beneficial uses (Idaho DEQ, 2012). Anderson Ranch reservoir (AU-ID17050113SW005L_0L) is designated as Category 5 - §303(d) list—waters of the state for which a TMDL is needed) based on mercury (Essig and Kostermann, May 2008).

The components of the hydro power facilities proposed on NFS lands include transmission lines and associated infrastructure. Specific Clean Water Act (CWA) laws and regulations for activities on NFS lands possibly applicable to the proposed activities include two executive orders which address the management of floodplains and wetlands: <u>Executive Order 11988 (floodplains)</u> - proposed activities must not increase flood hazards and must preserve the resource benefit of floodplains (i.e., their ability to dissipate flood flows and moderate peak flows);

<u>Executive Order 11990 (wetlands)</u> - proposed activities must preserve the resource benefits of wetlands (i.e., their ability to produce abundant diverse biota, buffer water quality, and recharge groundwater).

Forest Plan management direction which may be applicable for protection of soil and water resources include (USDA Forest Service 2010):

<u>SWST05 (standard)</u>: Management actions within RCAs that are associated with valid existing rights—such as mining, water diversions, and hydro-power—shall be coordinated with licensees, permittees, or claimants in an effort to maintain or restore beneficial uses and desired habitat conditions for native and desired non-native fish. 20131020 JUDI IERO IDI (UNOTILCIAI) 10/23/2013 J.13.13 IM

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<u>SWST06 (standard)</u>: In cooperation with affected state, tribal, and local governments, holders of water rights, and other interested parties, determine instream flows needed for protection of water-related resources when assessing permit or license actions such as mining claim development, hydropower development, snowmaking, or water transmission facilities. When determining the sufficient quality, quantity, and timing of flows, use the following four factors: (a) maintenance and restoration of habitat for fish, wildlife, and riparian plant communities; (b) maintenance of channel stability and capacity for passing floods; (c) maintenance of recreational opportunities such as fishing, swimming, boating, and aesthetic enjoyment; and (d) maintenance of water quality and natural temperature regimes. Make sufficient flows a condition of permit or license issuance.

<u>SWST07 (standard)</u>: Within legal authorities, ensure that new proposed management activities within watersheds containing 303(d) listed water bodies improve or maintain overall progress toward beneficial use attainment for pollutants that led to the listing. Lands

Project proponents will need to consider Powersite Classifications and other withdrawn federal lands. The BOR manages withdrawn lands around Anderson Ranch Reservoir. BOR presently maintains a memorandum of agreement with the Forest Service for management of applicable portions of the Anderson Ranch Reservoir. (Memorandum of Agreement - Forest Service, U.S. Department of Agriculture and the Bureau of Reclamation, U.S. Department of Interior - June 9, 1987) These areas should be depicted in the proponent's land status maps and considered during Project analyses.

The proposed power transmission right-of-way for the Project traverses a portion of National Forest System lands in Section 9, T. 1 S., R. 9 E., Boise Meridian. The parcel is in the NE ¼ of the NE ¼ of Section 9. This does not coincide with the Cat Creek Exhibit 3 project map depicting land status. Refer to the Master Title Plat.

Special Uses

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Any studies, such as biological sampling, geotechnical studies, or hydrological studies conducted on NFS lands will require special use authorizations. The proponents or their contractors will need to apply for permits through the Mountain Home Ranger District. Authorizations will be subject to processing fees and compliance with the National Environmental Policy Act.

Project planners will need to consider effects on the current holders of National Forest authorizations such as outfitter/guiding, recreation events, linear rights-of-way and communications facilities on NFS lands that would be affected by the proposed Project.

Minerals and Geologic Resources

Proponent should determine if any unpatented federal mining claims could be impacted by this Project. A detailed geotechnical study should be conducted for suitability of geology to support infrastructure of the Project. If any drilling is proposed as part the geotechnical study, impacts to surface and groundwater resources related to drilling should be analyzed. Proponent should identify any potential landslide-prone areas within the Project. If identified, issues related to this should be analyzed.

Roads

Any new planned roads on NFS lands would likely require a Travel Analysis Plan (TAP) and Travel Analysis Report (TAR.), per Subpart A of the Travel Management Rule

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(Rule) (36 CFR 212), which combines and clarifies regulations governing administration of the forest transportation system and regulations governing use of motor vehicles off NFS roads. The TAP should follow directives described in Forest Service Manual (FSM) 7712 and Forest Service Handbook (FSH) 7709.55, Chapter 20.

Road access to the proposed facilities from NFS roads would need to be coordinated and permitted. Maintenance of the NFS roads would be required, commensurate with use. Single-purpose roads would likely be required to have effective closure devices and periodic maintenance, commensurate with use. Temporary roads needed for the construction of the proposed facilities would likely need to be decommissioned. Road closure devices such as road gates would be required to meet Forest Service standards. Signs and posters would need to meet Forest Service guidelines.

Definitions:

<u>Forest road or trail</u>: A road or trail wholly or partly within or adjacent to, and serving the NFS that the Forest Service determines is necessary for the protection, administration, and utilization of the NFS and the use and development of its resources (WO Amendment 7700-2010-1, 36 CFR 212.1)

<u>NFS road</u>: A forest road other than a road which has been authorized by a legally documented right-of-way held by a State, County, or local public road authority (36 CFR 212.1)

<u>Single-purpose roads</u>: roads not open to the public but needed for long-term use and management of the proposed facilities

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<u>Temporary road</u>: A road necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road and is not included in a forest transportation atlas (36 CFR 212.1)

Range Resources

The Project appears to be in the Wood Creek On/Off Cattle Allotment. Project planners will need to consider effects on the current holders of National Forest authorizations such as outfitter/guiding, recreation events, linear rights-of-way and communications facilities on NFS lands that would be affected by the proposed Project.

Several species of noxious weeds are potentially found within and adjacent to the proposed Project area. The main species of concern in the Project area are: rush skeleton weed, leafy spurge, Dalmatian toadflax, white-top, and spotted knapweed. Any increase in bare soil that is likely to cause an increase in weeds will have a long-term negative effect on sensitive plants and potential sensitive plant habitats. These invading species often outcompete native flora. Mechanical equipment, soil disturbance, and erosion are all likely to increase the opportunity for weeds to become established. The Boise National Forest typically requires weed treatment both prior to and following ground disturbance, including feasibility or preliminary studies. To prevent the spread of weed seed, off highway equipment is required to be pressure washed and inspected to ensure that it is free of dirt or vegetative material prior to use on Boise National Forest. If approved, this Project would require a project-specific vegetation management and noxious weed monitoring and treatment plan.

Recreation and Visuals

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Anderson Ranch Reservoir is a popular place for many recreation activities including fishing, boating, camping, hunting, driving for pleasure, and viewing wildlife. A naturalappearing environment is very important to most recreationists; therefore Forest Plan standards were developed to protect the scenic environment.

Forest Plan Standard SCST01 states "All projects shall be designed to meet the adopted Visual Quality Objectives (VQOs) as identified in Management Area direction and represented on the Forest VQO map". These planning guidelines and management direction are provided to assure the protection of Boise National Forest scenic values. All new proposals must remain consistent with the visual management objectives of the proposed area of impact. This Project is located in an area with a VQO designation of Retention. Retention provides for management activities which are not visually evident to the casual Forest visitor. Activities may only repeat form, line, color, and texture which are frequently found within the characteristic landscape. Changes in size, intensity, patterns etc. should not be evident.

The proposed structures, 2 proposed 100 ft. silos, 2- 22 ft. steel penstocks and new 3.6 mile access route, and new transmission lines, would not meet the assigned VQO and would require a Forest Plan amendment. If a Forest Plan amendment is completed, the structures would still need to be designed to blend in with the natural environment.

The proposed structures if submerged may be a safety hazard and an eyesore when the water level is low. There are no terra trails, developed recreation sites, or dispersed camping areas in the Project area. There is a water trail along the reservoir. The pool fluctuations could impact recreation and the ability to use boat launches and

docks on the reservoir depending on pool storage. If additional public closures are necessary around the new structures there would be a reduction in public access for boating and fishing.

If this proposal includes plans to change the release schedule on the South Fork of the Boise River there would be impacts to the recreation sites along the river by changing public access, the recreation experience, and type of recreation available. A change in release schedules could affect the lower South Fork Wild and Scenic River eligibility. Potential Issues

- For the Project, what is the effect of the primary use season for the reservoir? Would the water level in the reservoir/tail stream fluctuate more that it currently does?
- Will there be additional areas of human avoidance such as buoyed sections of the reservoir/tail stream to keep people away from the intake/discharge areas?
- Are there future plans associated with this Project to change the release schedule on the South Fork of the Boise River? If so, this would impact recreation access and usage. The lower South Fork of the Boise River is proposed for "Wild and Scenic" designation.
- Would any access roads be closed to the public for the proposed Project?
- Any above-ground improvements such as penstocks and powerhouse structures will affect the visual quality.
- Would new roads associated with the Project be for administrative use only?
- What is the impact to the waterway during peak boating season?
- Will the Project result in more or less water in the system?

Wildlife Resources

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The proposed Project area consists of non-forested, riparian, and dry forest habitats which have the potential to support a variety of wildlife. The proponents would need to have field surveys conducted for wildlife species on the Region 4 sensitive species list and Endangered Species Act (ESA) listed species prior to Project implementation to comply with *Management Direction for Threatened, Endangered, Proposed, and Candidate Species and Wildlife Resources* identified in the Forest Plan. The current list of ESA species must be obtained from the USFWS. Management Direction in the 2010 Forest Plan must be complied with for proposed activities on NFS lands.

Known Species Occurrence and Direction

<u>Bald Eagle</u> – One bald eagle nest occurs within the Project area. Surveys would need to be conducted on the Project area to determine if an active nest is present and identify alternate nests. Project activities would have to comply with the Bald and Golden Eagle Protection Act. The National Bald Eagle Management Guidelines shall be used to protect nesting eagles. Forest Plan Wildlife Standard 03 "Mitigate management actions within known nesting or denning sites of sensitive species if those actions would disrupt the reproductive success of those sites during the nesting or denning period. Mitigation measures shall be determined during the project planning." must also be followed. <u>Sage Grouse</u> – The Project area provides occupied sage grouse habitat. Project activities on NFS lands would need to meet Forest Plan standards to protect or mitigate disturbance to nesting and brood rearing habitat. Forest Plan Wildlife Standard 03 "Mitigate management actions within known nesting or denning sites of sensitive species if those

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actions would disrupt the reproductive success of those sites during the nesting or denning period. Mitigation measures shall be determined during the project planning." On September 16, 2015 the Forest Service signed the Greater Sage Grouse Record of Decision for Idaho, Southwest Montana, Nevada and Utah which amends the Forest Plan to include additional direction for actions proposed in sage grouse habitat. The Project area occurs within occupied sage grouse habitat and therefore actions on NFS lands are required to comply with the amended direction.

<u>Big Game</u> – The proposed Project occurs in an established big game migration corridor and winter range. Projects would have to meet Wildlife Standard 06 "Mitigate humancaused disturbances within winter/spring ranges if disturbances cause displacement of wildlife while they are occupying those ranges". Idaho Department of Fish and Game should also be consulted regarding impacts to big game species and mitigation measures that can be taken to minimize or avoid negative effects.

<u>Migratory birds</u> – Compliance with the Migratory Bird Treaty Act and associated analysis will need to occur. The Project area provides riparian habitat that supports many species of passerines as well as shrub-steppe (i.e. non-forested) habitat. Both of these habitats have been identified as priority habitat types in the State by Idaho Partners in Flight. The Project area also occurs in an important area identified for waterfowl and migrating shore birds. Idaho Department of Fish and Game should be consulted for input on species associated with these priority habitats.

Timber and Fuels Resources

For portions of the Project located on NFS Lands the following would apply:

- Promote aspen within 200 feet of constructed roads, powerhouses, transmission lines and penstocks/conduits by cutting and removing encroaching conifers within existing aspen clones. Encroaching conifers removed will be charged standard stumpage as either saw timber or fuelwood.
- Standard stumpage rates for saw timber/fuelwood will be charged for all merchantable material removed to accommodate the immediate footprint of constructed roads, powerhouses, transmission lines and penstocks/conduits. This applies to areas not discussed in the aspen areas above.
- In areas where any improvements impact brush or forested communities, like acreage will be replanted on-site or nearby.
- Structural improvements will follow the 200-foot Firewise guidelines for defensible space as described at: http://idahofirewise.org/home-safety/

Heritage Resources

The entire area of Little Camas Prairie and High Prairie in the vicinity of the Project is one of the most archeologically sensitive areas on the Boise National Forest for Native American sites. The archeological record, ethnographic record, and historical record all attest to the significance of this area in Idaho history. The Project is likely to have substantial adverse direct, indirect, and cumulative effects to cultural resources in the area.

The proponent has stated the intention to conduct subsurface investigations. The Forest Service does not believe a full waiver of 18 CFR § 4.81 (c)(2) is warranted because of the potential effects to cultural resources. In addition, any ground disturbing

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activity on NFS land will require a special use authorization. Authorization will be

subject to compliance with the National Historic Preservation Act.

References

Essig, D. and M.A Kosterman. 2008. Arsenic, Mercury, and Selenium in Fish Tissue from Idaho Lakes and Reservoirs: A Statewide Assessment. Boise, ID: DEQ. http://www.deq.idaho.gov/media/639760arsenic mercury fish tissue report 0508.pdf.

Idaho Department of Environmental Quality. 2014. Idaho's 2012 Integrated Report. Boise, ID: Idaho Department of Environmental Quality.

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