

SECTION 3: USE REGULATIONS

RENEWABLE ENERGY RELATED SECTIONS

3.1. Standards for Community-, and Utility- Scale Solar Energy Systems

A. Purpose

The following section serves to encourage the efficient and effective development and use of all systems and facilities that generate renewable solar energy while protecting the public health, safety, and welfare of Routt County's residents.

1. To meet the goals of the Climate Action Plan and Master Plan, this section is intended to carry out the following actions:
 - a. Remove barriers to community renewable energy facilities, such as solar gardens, on-site generation, and virtual net metering of solar PVs;
 - b. Determine criteria that help mitigate impacts to visual resources, air quality, water quality, wildlife habitat or agricultural areas; and
 - c. Support the reuse of former coal or other fossil fuel facilities or infrastructure to aid a transition to lower carbon and renewable energy.

B. Applicability and Definitions

This section applies to all systems that produce renewable solar energy. The following definitions are applicable to solar production in Routt County:

1. "Solar Energy Systems" (SES) means an energy system of any scale designed to convert sunlight into a different form of energy. Solar Energy Systems may also be referred to as Solar Energy Facilities. Solar Energy Systems may include the following structures:
 - a. Solar collectors;
 - b. Equipment necessary for converting sunlight into a different form of energy (including photovoltaics). This may include charge regulators, inverters, and PV support structures (which may include buildings);
 - c. Transmission lines and other overhead and underground electrical distribution, collection, communications lines, towers and related appurtenances, electric transformers, electric substations, switch stations, junction boxes, battery energy storage facilities (where allowed by this section), telecommunications equipment and lines, and related power generation and transmission facilities;
 - d. Temporary and permanent roads, crane travel paths, fences, and gates;
 - e. Control buildings, maintenance buildings, maintenance yards, septic systems, laydown and staging areas, and related facilities and equipment; and
 - f. Associated landscaping, fencing and parking lots.
2. "Solar Collector" means a device used to absorb solar radiation and convert it into heat or electricity.
3. "Community-Scale Solar Energy Systems" means a Solar Energy Systems that are large in scale and primarily serve energy demands off-site from the facility. Community-Scale Solar Energy Systems are typically used to generate community- or neighborhood-wide energy. Due to their larger size, Community-

Scale Solar Energy Systems typically have more off-site and on-site impacts. Community-Scale Solar Energy Systems are those systems that are up to 20 acres in size and do not qualify as a Small-Scale Solar Energy System.

4. “Utility-Scale Solar Energy Systems” means Solar Energy Systems that are large in scale and primarily serve the energy demands off-site from the facility. Utility-Scale Systems are typically used to generate energy at the utility level and typically interconnect at a transmission level. Due to their larger size, they typically have more off-site and on-site impacts. Utility-Scale Solar Energy Systems are those systems that are up to 20 acres or larger in size.
5. “Solar Microgrids” are small-scale, localized solar energy systems that can be paired with Battery Energy Storage System and or a generator that can generate, store, and distribute electricity and may operate independently of, or in conjunction with, the main power grid. Microgrids may occur in Community-Scale Solar Energy Systems.
6. “Agrivoltaics” refers to any solar energy system that is co-located on the same parcel of land as agriculture production and/or ranching.
7. “Battery Energy Storage System” stores energy from different sources and discharges energy at a later time when needed to provide electricity or other grid services.
8. “Improved Area” means those geographic areas within the County that will be developed or altered directly by construction or operation of the project.
9. “Ground-mounted” is any solar energy system that is mounted on a rack or pole that is attached to the ground.
10. “Roof-mounted” is any solar energy system that is fastened or ballasted to a building roof.
11. “Solar Land Cover” is the entire land area that encompasses all components of the solar energy system, including but not limited to mounting equipment, panels and ancillary components of the system. Access roads, transmission lines, and fencing are not included in this calculation.
12. “Tilt” is the angle of the solar panel / collector relative to the horizontal ground plane. Tilt is most often between 5 and 40 degrees.
13. “Wildlife Corridor and Connectivity” is a designated passageway intended to preserve and facilitate the movement of wildlife species between fragmented habitats and natural areas.

C. Review Process

1. Community-scale solar systems are subject to a Planning Commission review for a Conditional Use Permit Approval, pursuant to **Section 3.2.1**. They must also comply with the requirements in 3.36.D as applicable.
2. Utility-scale solar systems are subject to a Planning Commission and BCC review for a Special Use Permit Approval, pursuant to **Section XX**. They must also comply with the requirements in 3.36.D as applicable.

D. Performance Standards

The following performance standards shall be met for Community-Scale and Utility-Scale Solar Energy Facilities.

1. Coordination

- a. All Applicants must work independently with the transmission or distribution provider that their system intends to interconnect with to complete their interconnection process. A Power Purchase Agreement and/or Interconnection Agreement shall be submitted prior to the issuance of any access or road improvement permit(s) or building permits.

2. Site Access

- a. Prior to commencement of any work to construct the facility, the applicant shall apply for and obtain any access or road improvement permit(s) from the Routt County Department of Public Works or CDOT, as applicable. The application shall comply with all requirements, including the then-adopted Routt County Road and Bridge Roadway Standards or CDOT standards, as applicable.
- b. New access drives shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the site.
- c. Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system.

3. Road Engineering Study

- a. A Road Engineering Study shall be conducted according to Routt County Public Work's procedure. All improvements recommended by the study shall be installed prior to the commencement of any work to construct the facility.

4. Height Limitation

- a. Ground-mounted solar collectors shall not exceed twenty-five (25) feet in height, measured from the lowest grade below each solar collector to the highest extent of the solar collector rotation.

5. Visual Impacts

- a. In order to minimize the potential visual impacts of the Solar Energy System, certain activities should be minimized or avoided, as detailed below. A site plan and visual impacts statement, with a description of the impacts and net effect of the proposed project on visual quality and proposed mitigation, shall be included in the application to determine compliance with the following standards:
 - i. Avoid clear-stripping of right-of-way or easement. Any required clearing shall be designed to create a natural appearance that blends with surrounding vegetation by using variations in clearing width.
 - ii. Avoid creation of access scars.
 - iii. Avoid visually important scenic vistas, including, but not limited to, the south valley floor and the US Highway 40 and County Road 129 corridors.
 - iv. Preserve as much as possible the natural landscape.

- v. Minimize alteration of the natural slope or aspect of any hillside.
- vi. Stockpiles shall be limited to ten (10) feet in height.

6. Setbacks

- a. The area of Solar Land Cover shall conform to the setback requirements of the underlying zone district, except as set forth below.
- b. Adjoining lots may be collectively utilized for a single solar energy system facility across property lines and/or easement. In such event, the setback requirements of the underlying zone district shall be waived as to any internal property lines of the project.
 - i. When the lots do not share one single owner, collective grouping is only allowed if an agreement signed by the owners of the affected lands is recorded with the Routt County Clerk and Recorder.
 - ii. Solar energy systems may cross easements with informed consent signed by the affected easement owner, agreeing to the encroachment. This shall be an agreement signed by the owners of the affected lands.
- c. When adjacent to an existing residential building, setbacks shall comply with the following standards:
 - i. Community-Scale Solar Energy Systems. The improved area must be at least one hundred (100) feet from existing residential buildings.
 - ii. Utility-Scale Solar Energy Systems. The improved area must be at least one hundred (100) feet from existing residential buildings.
 - iii. This residential setback requirement may be reduced by up to fifty (50) percent if appropriate screening through landscaping, if an opaque fence is installed, or upon submittal of a waiver or informed consent signed by the affected landowner agreeing to the lesser setback. If landscaping or opaque fencing is substituted for setback, a landscaping plan or fencing plan shall be submitted and approved through the review process. In no case will the setback be reduced to less than that required by the underlying zone district for properties that are not part of the improved area.
- d. The Solar Energy System shall comply with waterbody setbacks according to Section 5.11.5, Minimum Setbacks from a Waterbody.

7. Site Design

- a. Applicants shall implement a site design that considers vegetation cost, effectiveness in infiltration, and diversity of an ecosystem, both under and between arrays.

8. Screening

- a. Screening and buffering shall mitigate any adverse visual and audible impacts from Solar Energy Systems to adjacent properties. Screening of transformers, substations, switch stations, batteries and associated enclosures, and buildings

is required. Screening of the Solar Collectors is not required, however is encouraged through the following techniques:

- i. The layout of these facilities shall be designed to minimize the amount of screening that is required.
 - ii. Vegetation or other screening techniques, such as fencing, may be used to effectively screen the area.
- b. Developments may be exempt from this screening requirement if the Planning Department finds that the screening requirements could negatively impact system performance.

9. Dust Mitigation

- a. A dust mitigation plan specific to the duration of the construction is required at the time of application.
- b. The operator shall consult with CPW on dust suppression measures that occur within 500 feet of mapped waterways.
- c. The operators of the facility shall continuously employ practices detailed in their dust mitigation plan, which include, at a minimum the following actions:
 - i. Limit area of disturbance to reduce dust generation. Minimize overlot grading for projects and phase grading with construction;
 - ii. Minimize dust through gravel, water or chemically stabilizing public and private access roads, stripped areas, transfer points and excavations. Gravel or chemical stabilization is preferred, and water stabilization shall be minimized to the extent possible;
 - iii. Increase mitigation operations immediately in response to periods of high wind conditions or dust complaints; and
 - iv. Revegetate disturbed areas as soon as possible.

10. Fencing

- a. The facility shall be enclosed with a security fence approved pursuant to a fencing plan. Appropriate signage shall be placed upon the fencing that warns the public of the high voltage.
- b. A fencing plan shall be included in the Wildlife Mitigation Plan, developed in consultation with CPW. All exclusionary fencing shall comply with the following requirements:
 - i. The height of the fence's top wire shall be eight (8) feet;
 - ii. Fencing shall be mesh or woven with at least six (6) inch openings; and
 - iii. No barbed wire may be used on top of the fence.

11. Ground Cover and Vegetation Preservation and Management

- a. Applicants shall maximize the preservation of pre-construction vegetation.
- b. For the purpose of preventing erosion and managing runoff, disturbed land, including the land under and around the solar collectors, shall be seeded with a vegetation seed mix based on prairie grasses and forbs (wildflowers) native to

Colorado, as determined by Colorado Parks and Wildlife’s “Colorado Seed Mix Tool” which includes pollinator plants where compatible with site conditions (i.e. some pollinator plants should not be established underneath solar collectors due to their height). Seeding shall occur prior to, during, and after construction.

- c. Deep-rooted vegetative cover between and under arrays shall be used to lower bulk density, increase infiltrative capacity, and reduce the need for vegetative maintenance over the life of the project.
- d. Ground cover and vegetation shall be continually maintained on the site and replaced as needed for the duration of the Use Permit. The applicant shall include a ground cover vegetation establishment and management plan as part of the application. Such plan shall include the following components:
 - i. A plan to establish vegetation to control invasive plant species and noxious weeds;
 - ii. Staged use of compatible cover crop with the final vegetative mix to bridge the time between the end of construction and establishment of final vegetative cover; and
 - iii. The use of appropriate vegetative cover under the array that can be self-sustaining and sufficient to maintain the vegetative root system and infiltrative capacity.

12. Erosion and Sedimentation Control

- a. Erosion and sedimentation control measures must be employed to ensure that disturbed areas and soil stockpiles are stabilized during construction. The following control measures shall be used:
 - i. Retain topsoil that is disturbed during site preparation and construction to be used on-site; and
 - ii. Utilize retained topsoil during operation of the solar facility, as reasonably feasible, in order to minimize soil compaction and improve overall stormwater flows.
- b. When topsoil is stockpiled for use during reclamation efforts, the following standards shall be met:
 - i. Save and store all salvageable topsoil for use at reclamation for higher quality revegetation; and
 - ii. Contour and condition topsoil stockpiles to a slope conducive to establishing vegetative cover.
- c. All disturbed areas shall be reseeded for revegetation within one growing season. Vegetation shall be established within three years.

13. Stormwater and Water Quality

- a. Solar Energy Systems shall not result in a degradation of Routt County’s water resources. The systems shall adequately maintain water quality throughout the life of the solar energy system through the following standards:

- i. Include a calculation of the watershed function in the development application. Use of the National Renewable Energy Lab (NREL)'s Photovoltaic Stormwater Research and Testing project (PV-SMaRT) may be used to determine the impact.
- ii. Incorporate infiltration into the solar array layout to ensure sheet flow. This is particularly important in areas with Class C or D soils (tight soils, fine soils, clay, etc.). Information about the site's soils shall be included in the application.
- iii. Implement measures that limit bulk density (the compaction of soils) as a method of managing stormwater runoff, water quality, and vegetation. The following measures shall be complied with:
 - (a) The soil bulk density shall be between 1.1-1.5 g/cm³. This standard may be adjusted depending on the soil classification or texture.
 - (b) The site design (array layout, vegetation selection, final stabilization procedures) shall be modified to reduce bulk density, particularly for sites with finer soils.
 - (c) Bulk density shall be measured both before and after construction, both between arrays and under arrays.
 - (d) Post-construction, if bulk density is high, the areas between arrays shall be decompacted to a minimum of six inches and under arrays to a minimum of four inches.
 - (e) Minimize grading to the greatest extent practical and select pile and array systems that require less or no grading.
 - (f) During construction, the use of heavy equipment shall be limited to specific areas to minimize soil compaction.

14. Emergency Response Plan

- a. An Emergency Response Plan is required at the time of application.
- b. The applicant shall coordinate with all emergency response providers to develop the Emergency Response Plan.
- c. All personnel shall have access to the Emergency Response Plan and are required to be trained on its contents.
- d. The Plan shall describe the hazards to the facility and procedures to respond to them. It shall include at least the following:
 - i. Facility overview that describes site location, capacity and output, and key contacts including facility managers.
 - ii. Identification of all potential hazards (i.e. fire, electrical, chemical, weather-related events, and security threats)
 - iii. Equipment and areas vulnerable to hazards
 - iv. Emergency response
 - (a) Roles and responsibilities
 - (b) Contact information
 - (c) Training and drills
 - (d) Communication protocols

- v. Emergency procedures
 - (a) Fire suppression methods and equipment
 - (b) Electrical hazard lockout procedures
 - (c) Chemical hazard spill response procedures
 - (d) Severe weather monitoring and evacuation protocols
 - (e) Intrusion detection and response
- vi. Evacuation Plan
- vii. First aid and medical assistance resources and equipment

15. Arrangement

- a. Solar Collectors must be arranged in a way that:
 - i. Allows the passage of runoff between each Solar Collector, thereby minimizing the creation of concentrated runoff;
 - (a) Ensures a parallel layout of the drip edge to contours or install devices to ensure sheet flow from the drip edge. Larger panels require both additional separation or disconnection due to more volume at the drip edge (primarily for fixed rather than tracking arrays) and increase the need for dissipation BMPs to ensure sheet flow.
 - ii. Allows for the growth of vegetation beneath and between the collectors; and
 - iii. Provides wildlife movement corridors through the project area, as determined necessary, for the purpose of facilitating wildlife passage and landscape connectivity.

16. Underground Cables

- a. All electrical cables on the improved area shall be buried except for string wires that connect between solar collectors, collection circuits between rows of solar arrays that are no more than four (4) feet above grade crossings, substations, switchyards, and circuit voltages greater than 34.5 kilovolts (where necessary).

17. Provisions for Battery Energy Storage Systems

- a. All batteries shall be configured so that battery cells are placed in a Battery Energy Storage System. The Energy Storage System shall provide a secondary layer of physical containment for the batteries and be equipped with cooling, ventilation, and fire suppression systems.

18. Sound

- a. The sound pressure level of the Solar Energy System and all ancillary equipment shall not exceed the residential standard of 55 dBA at the property line of an adjoining non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.

19. Agricultural Lands

- a. Agricultural land is highly valued in Routt County, and the preservation of these lands is a high priority. While the placement of Solar Collectors may limit agricultural uses for prime farmland during the time of operation, the use of these lands for Solar Energy Systems creates the opportunity to enable longer-term use of the land for agricultural uses versus other land use types. The applicant and facility operator shall ensure that the facility does not have significant adverse impacts on agricultural lands and agricultural operations, and facilitates the long term ownership of the farmland. The decommissioning plan shall incorporate how this will be addressed; see Section 3.36.D.26.

20. Agrivoltaics

- a. The use of land for both agriculture, including livestock ranching, and solar photovoltaic energy generation, may be permitted in the following instances:
 - i. Only appropriate plant species for the desired agricultural operation are used;
 - ii. A written erosion and sediment control plan is developed for agricultural plowing or tilling activities; and
 - iii. Application of chemical fertilization or herbicides/pesticides is limited to the agronomic needs of the crop(s).

21. Parking

- a. Staging activities and parking of equipment and vehicles is prohibited on County maintained roads. All staging and parking shall occur on-site.

22. Maintenance

- a. The facility shall be maintained and operated to ensure the safety of site personnel and the public, and in a manner that minimizes fire risk caused by vegetation. All security fencing and gates should be regularly inspected and maintained to preclude access from the public and wildlife.
- b. A Weed Management Plan is required. This plan must identify preventive measures to minimize the spread of noxious weeds as determined by Colorado Noxious Weed Law limitations and requirements. The following measures are required:
 - i. Prior to ground-disturbing activities, the site shall be assessed by a Colorado licensed biologist;
 - ii. Routine maintenance of vegetation;
 - iii. The operator will stockpile cleared vegetation and salvaged topsoil adjacent to areas identified for weed infestations;
 - iv. All contractor vehicles and equipment will be cleaned prior to arrival at the work site using compressed air or high-pressure water spraying equipment;
 - v. Limit the size of any vegetation and/or ground disturbance to the absolute minimum necessary;

- vi. Avoid creating unnecessary soil conditions that promote weed germination and establishment;
- vii. Ensure that straw or hay bales used for sediment barrier installations or mulch distribution are certified weed-free;
- viii. Continue to monitor known infestation areas to determine if these areas require remedial action and treatment.

23. Workforce Housing Plan

- a. A plan describing the methods of housing workers associated with construction of the solar facility is required. This should identify the method for providing housing and a plan for transportation of workers.

24. Wildlife

- a. Sensitive wildlife species and their habitats shall be avoided to the greatest extent possible, especially during critical periods. All efforts shall be made to avoid facility activities and uses from bisecting any existing habitats and wildlife corridors on, and adjacent to, the site. This includes the clearing of land and placement of infrastructure, such as collectors, transmission lines, roads and other appurtenances that may bisect the important habitat or wildlife corridors. Applicants shall mitigate the impact that the project has on both the local wildlife on the site, as well as the overall wildlife patterns in the region, through the following actions:
 - i. Applicant shall work with CPW to identify high priority habitat and design their project to avoid, minimize and mitigate potential impacts to wildlife and their habitats.
 - ii. The facility shall maintain landscape connectivity of habitats and provide wildlife movement corridors through and around the improved area and shall be identified on the submitted Site Plan.
 - iii. A pre-development wildlife and habitat survey (“Pre-Development Wildlife Survey”) shall be performed by a qualified wildlife biologist. Such survey shall be conducted for at least one year prior to application and will be required to assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, wildlife, endangered and threatened species. Consultation with CPW will be required before survey protocol is finalized.
 - iv. The Pre-Development Wildlife Survey shall be included in a Wildlife Mitigation Plan, which shall identify all appropriate measures to avoid, minimize, mitigate anticipated adverse impacts and show those measures on the site plan, where applicable. For the purpose of this section, mitigation is defined as measures intended to offset the loss or degradation of wildlife habitats offsite, or through other means to compensate for the unavoidable impacts of the proposed development.

- (a) The Wildlife Mitigation Plan shall be used to avoid, minimize and mitigate potential impacts to wildlife and their habitats. A narrative identifying impacts and what

measures and alternatives were considered shall be submitted. Wildlife protection measures may include seasonal timing limitations, best management practices, and compensatory measures consistent with CPW's Recommendations to Avoid and Minimize Impacts to Wildlife from Land Use Development in Colorado. The Wildlife Mitigation Plan shall include a fencing plan and locations of dust suppression measures in compliance with the standards found in section 3.36.D.9 and 3.36.D.10.

- v. A post-development wildlife and habitat survey shall be conducted. Such survey shall be at least one year in length and shall be conducted using similar methods as the pre-development survey.
- vi. Pre-construction and post-construction wildlife reports are required, and shall include all forms of raw data collected at onset, during, and for the post construction surveys after a yearlong study is completed. A referral from CPW, submitted at the time of application, shall be used to confirm compliance with this standard.
- vii. All screening techniques shall be placed in such a way to provide pathways that enable the movement of wildlife.
- viii. All exclusionary fencing shall comply with the standards found in section **3.36.D.10.**

25. Lighting

- a. Any lights installed as necessary for the facility's operation shall comply with the following standards:
 - i. Be limited to the inverter and/or substation locations only;
 - ii. Have cut-off shields and use down-lighting to avoid illuminating dark skies and reduce visibility from beyond the project site;
 - iii. Be the minimum amount of brightness necessary for operational safety and security;
 - iv. Be controlled by automatic controls including timers or motion detectors; and
 - v. Not include any flashing or intermittent lights.

26. Transmission Lines

- a. If additional overhead transmission lines are required, measures to minimize impacts to birds shall be implemented. These may include, but are not limited to increasing line visibility, insulating wires to cover exposed connections, installing raptor perch deterrents on cross arms, and increasing the distance between wires so there is lesser risk of contact with energized wires.

27. A Decommissioning/Reclamation Plan

- a. A Decommissioning/Reclamation Plan shall be submitted with the application and shall comply with the following:

- i. The Decommissioning Plan shall address how agricultural lands will be restored to enable agricultural usage following removal of the solar energy system.
- ii. Decommissioning/reclamation shall commence no later than twelve (12) months after equipment is removed from the SES having equipment removed, power is disconnected, or loss of lease. All decommissioning/reclamation shall be completed within twenty four (24) months from the start date of the work.
- iii. All non-utility owned equipment, conduits, structures, fencing, and foundations shall be removed to a depth of at least three (3) feet below grade. Any soil exposed during the removal shall be stabilized in accordance with the currently effective CDOT erosion control and stormwater quality standards.
- iv. All fences, graveled areas and access roads shall be removed unless a landowner agreement to retain these items is presented, in writing, in which the property owner agrees for these items to remain.
- v. To the extent possible, the property shall be restored to a condition reasonably similar to its condition prior to development of the facility.
- vi. The developer or owner of the facility is responsible for the decommissioning.
- vii. Decommissioning/Reclamation Surety. Valid surety shall be a condition of operating a Community-Scale or Utility-Scale Solar Facility. However, nothing in this section shall relieve the applicant of liability for closure, post-closure, or corrective action costs.
 - (a) Surety, in a form in compliance with the Routt County Insurance and Surety Requirements policy, for the decommission and reclamation of the site shall be required prior to building permit issuance. The surety shall be in an amount of 150% of the approved current engineer cost estimate for decommissioning.
 - (b) The surety amount shall be updated every five (5) years, in concurrence with the updated engineer cost estimate detailed below, Decommissioning and Reclamation Cost Estimates.
- viii. Decommissioning and Reclamation Cost Estimates. A qualified engineer's cost estimate for decommissioning/reclamation is required and shall be included in the Decommissioning Plan. Cost estimates and surety shall be updated every five (5) years from the establishment and submittal of the surety, shall include all costs associated with the dismantlement, recycling, and safe disposal of facility components and site reclamation activities and shall include the following elements:
 - (a) All labor, equipment, transportation, and disposal costs associated with the removal of all facility components from the facility site;
 - (b) All costs associated with full reclamation of the facility site, including removal of non-native soils, grading to approximate pre-development contours, fences, and constructed access roads;

- (c) All costs associated with reclamation of any primary agricultural soils at the facility site to ensure that each area of direct impact is materially similar to the condition it was before construction;
 - (d) All decommissioning/reclamation activity management, site supervision, site safety costs;
 - (e) All costs related to complete revegetation of the site to return it to its condition prior to the development of the facility; and
 - (f) Any other costs, including administrative costs, associated with the decommissioning and reclamation of the facility site.
 - (g) The salvage value from any of the facility components can be subtracted from this estimate.
- ix. Revegetation. Land disturbed as part of the construction, commercial operation and/or decommissioning process shall be reseeded or revegetated to a condition reasonably similar to its condition prior to development of the facility, as determined after a complete growing season.
- (a) Soil shall be tested twice. The first test shall occur prior to energy being produced by the system. The second shall be after the system ceases production but before any equipment is removed. The two shall be compared to evaluate any soil contamination and develop a remediation program, if necessary. Soil tests sample shall be representative of the overall area through a combination of five (5) sample spots in the area. Areas that have a clear difference in soil type, drainage, or plant growth shall be avoided for sample collection.
 - (b) Land disturbed as part of the decommissioning process shall be reseeded or re-vegetated with crops and native seed mixes according to the Colorado Parks and Wildlife’s “Colorado Seed Mix Tool” or with other vegetative species that provide ecological services, such as carbon sequestration, increased soil health, habitat preservation, or water quality improvements.
 - (c) Revegetation or other land disturbance mitigation shall be completed within one (1) calendar year of removal of the solar facility. A one-time extension of six-months may be granted by the Planning Director if required to ensure a complete growing season.

28. Economic and Community Benefit Analysis.

- a. An analysis is required to measure the benefits to the community and the local economy. The analysis shall include a description of how the project impacts the following:
 - i. Economic and Fiscal Impact
 - (a) Evaluate the number and type of jobs the project is expected to create, both during construction and for the duration of its operation. Identify how these employees will be housed during the project.

- (b) Assess the project's likely potential to generate income for residents and businesses in the area.
 - (c) Evaluate the potential tax revenue generated by the project and its impact on the County budget.
 - (d) Identify the costs to the County, if any, associated with the solar energy facility (e.g., the cost of infrastructure upgrades) and compare with the anticipated economic and community benefits.
- ii. Community Benefit
 - (a) Identify any proposed infrastructure improvements, such as road upgrades or utility enhancements, and how those will benefit the community.
 - (b) Identify how the solution for housing employees will benefit the community in the long term.
 - (c) Identify any other anticipated community benefits.
 - iii. Transportation and Mobility:
 - (d) Analyze the project's impact on traffic including anticipated vehicle trips per day and how these transportation impacts will be mitigated during the construction phase and longer term operations.
 - iv. Infrastructure
 - (a) Analyze the demand for local government services including roads, schools, water and wastewater treatment, water supply, emergency services, transportation, infrastructure, and other County services necessary to accommodate the employees of the facility.
 - v. Recreation
 - (a) Identify any impacts to existing outdoor recreation facilities, such as trails, and how those impacts will be mitigated.
 - (b) Identify whether the project creates or enhances public spaces.

3.2. Standards for Small-Scale Solar Energy Systems

A. Purpose

The following requirements and performance standards are intended to guide the safe and efficient construction and operation of solar for both ground- and roof-mounted, small-scale, single-site use. This section also sets standards for placement and maintenance of these facilities to mitigate impacts on adjacent lands and the surrounding environment.

B. Definitions

1. "Small-Scale Solar Energy Systems" means renewable energy systems that are used on an individual site scale. The energy produced by these facilities is intended for private use on the parcel, or an adjacent parcel. These are typically

smaller solar collectors able to produce energy necessary for all, or a fraction of, the energy demands on the individual site. Due to their limited size, they typically have fewer off-site impacts.

C. Review Process

1. Small-Scale Solar Energy Systems, both roof-mounted and ground-mounted, are exempt from a separate land use review, and require only a building permit. Confirmation of compliance with 3.36 will be evaluated through the building permit review. Small-Scale Solar Energy Systems are a use by right in all zone districts.
2. Small-Scale Solar Energy Systems that require a modification to standards in 3.37.D.4 require a variance from the Board of Adjustment pursuant to Section 3.2.1.

D. Performance Standards

1. The following performance standards shall be met for Small-Scale Solar Energy Systems:
 - a. These systems shall be located on a buildable lot/parcel or platted out-lot;
 - b. Small-Scale Solar Energy Systems may be ground or roof mounted;
 - i. The following standards are applicable to all roof-mounted collectors:
 - (a) Roof-mounted collectors may be mounted on any legal structure, subject to review through the building permit process;
 - (b) Roof-mounted collectors shall be mounted as flush as possible to the roof. To achieve proper solar orientation, collectors may exceed the roofline by up to five (5) feet vertically above the high point, or the maximum permitted height of the structure by up to five (5) feet, whichever is more restrictive).
 - (c) Roof-mounted collectors shall comply with applicable state and local fire codes to ensure emergency access to the roof, provide pathways to specific areas of the roof, provide areas for smoke ventilation, and provide emergency egress from the roof.
 - ii. Ground-mounted Solar Systems shall be subject to the following setbacks:
 - (a) Property line setbacks of the underlying zone district or fifteen (15) feet, whichever is less;
 - (b) Waterbody setbacks according to Section 5.11.5, Minimum Setbacks from a Waterbody; and
 - (c) Minimum of forty-five (45) feet from the centerline of the roadway, or fifteen (15) feet from the edge of the roadway, whichever is greater.