CHAPTER 7   MITIGATION MEASURES

7.1   List of Mitigation Measures

7.1.1   Aesthetics

CAP Mitigation Measure M-AES-1: During the environmental review process for future Major Use Permits for all large-scale renewable energy projects, the County Guidelines for Determining Significance for Visual Resources and Dark Skies and Glare shall be applied. When aesthetic impacts are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: siting/location considerations; minimizing development and grading of steep slopes; natural screening and landscaping; undergrounding utilities; inclusion of buffers; and lighting restrictions.

CAP Mitigation Measure M-AES-2 Require that a Lighting Mitigation Plan be prepared as part of the MUP discretionary review process for all large-scale renewable large-scale renewable energy projects. The Lighting Mitigation Plan would demonstrate that the design and installation of all permanent lighting for large wind turbines or large geothermal stacks ancillary facilities is such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. The Lighting Mitigation Plan would demonstrate consistency with the Light Pollution Code (Section 59.100 et al.) and Sections 6322 and 6324 of the Zoning Ordinance to ensure outdoor light fixtures emitting light into the night sky do not result in a detrimental effect on astronomical research and to ensure reflected glare and light trespass is minimized.

CAP Mitigation Measure M-AES-3 Require that a Shadow Flicker Study be prepared as part of the MUP discretionary review process for all wind turbine projects. The Shadow Flicker Study would utilize a shadow flicker model run to determine the potential shadow flicker that could occur at sensitive receptors within 2,000 meters (6,562 feet) of the proposed turbines. For wind turbine projects because some receptors may lie within 60° due north of the turbines, outside of the sun's path at any given point in the year, these receptors may be excluded from the study. Beyond 2,000 meters, the human eye would not be able to discern a shadow cast from a wind turbine for example. The modeling should utilize many different inputs, including:

1) Real Data

- Actual coordinates of turbines
- Actual coordinates of receptors
- Actual topographic data

2) Conservative Assumptions

- Specifications of the turbines being considered with the highest hub height and longest rotor diameter

- 100% turbine operation

- No vegetative screening

- Receptors can be impacted from all directions (i.e., "greenhouse mode")

3) Realistic Features

- Actual wind data from a local meteorological tower to account for the percentage of time wind blows from each direction

- National Weather Service sunshine probability data to approximate average cloud cover

7.1.2   Agricultural Resources

CAP Mitigation Measure M-AGR-1: During the environmental review process for future MUPs for large-scale renewable energy projects, the County Guidelines for Determining Significance for Agricultural Resources shall be applied. When impacts to Farmland are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: avoidance of agricultural resources; preservation of agriculture; and inclusion of compatibility buffers near areas intended for agricultural uses.

CAP Mitigation Measure M-AGR-2: During the environmental review process for future MUPs for large-scale renewable energy projects, the County Guidelines for Determining Significance for Agriculture and Biological Resources shall be applied. When impacts to forest land are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: avoidance of sensitive resources; preservation of habitat; revegetation; and resource management.

7.1.3   Air Quality

CAP Mitigation Measure- M-AQ-1: During the environmental review process for future discretionary permits for projects implemented under the CAP, the County Guidelines for Determining Significance for Air Quality shall be applied. When impacts are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: dust control efforts; grading or fuel use restrictions; use of modified equipment; and restrictions on vehicle idling time.

CAP Mitigation Measure M-AQ-2: Coordinate with SDAPCD in implementing pending Rule 67.25 to reduce emissions and odors from composting operations. The rule is expected to establish best management practices for chipping and grinding of green waste to produce materials for composting or other uses, and to better manage stockpile operations to reduce emissions.

CAP Mitigation Measure M-AQ-3: The County shall use the policies set forth in the CARB's Land Use and Air Quality Handbook (CARB 2005) as a guideline for siting new sources of odor related to solid waste.

CAP Mitigation Measure M-AQ-4: Require project applicants to conduct an odor impact analysis and incorporate control measures including but not limited to, rapid incorporation of food waste and biweekly turnover to maintain aerobic conditions for open systems, and wet or dry scrubbers or bioscrubber systems on enclosed structures to reduce impacts.

7.1.4   Biological Resources

CAP Mitigation Measure M-BIO-1: During the environmental review process for future MUPs for large-scale renewable energy projects, the County Guidelines for Determining Significance for Biological Resources shall be applied. When impacts to biological resources are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: avoidance of sensitive resources; preservation of habitat; revegetation; resource management; and restrictions on lighting, runoff, access, and/or noise.

CAP Mitigation Measure M-BIO-2: Update the County Guidelines for Determining Significance for Biological Resources to include, or incorporate by reference, recommendations from the California Department of Fish and Wildlife, the Avian Power Line Interaction Committee, the USFWS Draft Guidance, and the California Energy Commission (e.g., California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development). Examples of recommended mitigation measures include: site screening; pre-permitting monitoring; acoustic monitoring; buffer zone inclusion; reduction of foraging resources near turbines and transmission lines; specific lighting to reduce bird collisions; post-construction monitoring; and avian protection plans.

7.1.5   Cultural and Historical Resources

CAP Mitigation Measure M-CUL-1: For all small-scale wind turbine projects, the County shall provide incentives through the Mills Act to encourage the restoration, renovation, or adaptive reuse of historic resources. This will be done by reaching out to property owners with identified historic resources to participate.

7.1.6   Energy

No significant impacts. Mitigation is not required.

7.1.7   Greenhouse Gas Emissions

CAP Mitigation Measure M-GHG-1: The County shall require in-process and future GPAs to reduce their emissions to ensure that CAP emission forecasts are not substantially altered such that attainment of GHG reduction targets could not be achieved. Project applicants for in-process and future GPAs could accomplish this through two options, as outlined below:

Option 1 (No Net Increase): GPA project applicants shall achieve no net increase in GHG emissions from additional density above the 2011 GPU. Applicants shall be required in their respective CEQA documents to quantify the GHG emissions from their projects that exceed the GHG emissions for the 2011 GPU density or intensity forming the basis of the CAP emission forecasts (i.e., projections). This increase in emissions shall be reduced through on-site design features and mitigation measures and off-site mitigation, including purchase of carbon offset credits by the applicant. Applicants shall demonstrate compliance with relevant CAP measures as identified in the "CAP Consistency Review Checklist" in addition to all feasible on-site design features and mitigation measures. Off-site mitigation, including purchase of carbon offset credits, would be allowed after all feasible on-site design features and mitigation measures have been incorporated.

For example, if 400 residential units were allowed under the 2011 GPU and a GPA proposes 500 residential units, the emissions for the additional 100 units would be calculated and offset through compliance with the CAP Consistency Review Checklist and additional feasible on-site measures and off-site measures, including the use of carbon offsets. The emissions associated with the allowable density of 400 units would be mitigated through compliance with the CAP Consistency Review Checklist.

The County will consider, to the satisfaction of the Director of Planning & Development Services (PDS), the following geographic priorities for GHG reduction features, and GHG reduction projects and programs: 1) project design features/on-site reduction measures; 2) off-site within the unincorporated areas of the County of San Diego; 3) off-site within the County of San Diego; 4) off-site within the State of California; 5) off-site within the United States; and 6) off-site internationally.

Geographic priorities would focus first on local reduction features (including projects and programs that would reduce GHG emissions) to ensure that reduction efforts achieved locally would provide co-benefits. Depending on the carbon offset ~~project~~ credit utilized, co-benefits may include reductions in criteria air pollutants, toxic air contaminants, energy demand, water consumption, health

benefits, social benefits, and economic benefits. The GPA applicant or its designee shall first pursue offset projects and programs locally within unincorporated areas of the County of San Diego to the extent such ~~direct investment projects and programs~~ carbon offset credits are available and are financially feasible, as reasonably determined by the Director of PDS.

If carbon offset credits are provided as mitigation, the GPA applicant, or its designee, shall purchase and retire carbon offsets in a quantity sufficient to offset the net increase from GHG emissions above the density or intensity allowed in the 2011 GPU. This includes all GHG emissions from construction (including sequestration loss from vegetation removal) and operations.

For the net increase of construction and operations GHG emissions, prior to County's issuance of the project's first grading permit (for construction GHG emissions) or first building permit (for operations GHG emissions) the GPA applicant, or its designee, shall provide evidence to the satisfaction of the Director PDS that the project applicant or its designee has purchased and retired carbon offset~~s~~ credits in a quantity sufficient to offset the net increase of construction and operations GHG emissions generated by the project. Operations emissions may be offset in phases, commensurate with the overall phasing of the project.

Carbon offset credits must be purchased through any of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard, (ii) any registry approved by CARB to act as a registry under the state's cap-and-trade program, (iii) through the CAPCOA GHG Rx and the SDAPCD, or (iv) if no registry is in existence as identified in options (i), (ii), or (iii), above, then any other reputable registry or entity that issues carbon offsets consistent with Cal. Health & Saf. Code section 38562(d)(1)), to the satisfaction of the Director of PDS.

Option 2 (Net Zero): GPA project applicants shall reduce all project GHG emissions to zero to achieve no net increase over baseline conditions (carbon neutrality). Project emissions shall be reduced to zero through on-site design features and mitigation measures and off-site mitigation, including purchase of carbon offset credits by the applicant or its designee. Applicants shall demonstrate compliance with relevant CAP measures as identified in the "CAP Consistency Review Checklist" before considering additional feasible on-site design features and mitigation measures. Off-site mitigation, including purchase of carbon offset credits, would be allowed after all feasible on-site design features and mitigation measures have been incorporated.

The County will consider, to the satisfaction of the Director of Planning & Development Services (PDS), the following geographic priorities for GHG reduction features, and GHG reduction projects and programs: 1) project design features/on-site reduction measures; 2) off-site within the unincorporated areas of the County of San Diego; 3) off-site within the County of San Diego; 4) off-site

within the State of California; 5) off-site within the United States; and 6) off-site internationally.

Geographic priorities would focus first on local reduction features (including projects and programs that would reduce GHG emissions) to ensure that reduction efforts achieved locally would provide co-benefits. Depending on the ~~direct investment project~~ carbon offset credit utilized, co-benefits may include reductions in criteria air pollutants, toxic air contaminants, energy demand, water consumption, health benefits, social benefits, and economic benefits. The GPA applicant or its designee shall first pursue offset projects and programs locally within unincorporated areas of the County of San Diego to the extent such ~~direct investment projects and programs~~ carbon offset credits are available and are financially feasible, as reasonably determined by the Director of PDS.

If carbon offset credits are provided as mitigation, the GPA applicant, or its designee, shall purchase and retire carbon offsets in a quantity sufficient to offset all GHG emissions from the project. This includes all GHG emissions from construction (including sequestration loss from vegetation removal) and operations.

Prior to the County's issuance of the project's first grading permit (for construction GHG emissions) or first building permit (for operations GHG emissions) the GPA applicant, or its designee, shall provide evidence to the satisfaction of the Director of PDS that the project applicant or its designee has purchased and retired carbon offset~~s~~ credits in a quantity sufficient to offset all construction and operations GHG emissions generated by the project. Operations emissions may be offset in phases, commensurate with the overall phasing of the project.

Carbon offset credits must be purchased through any of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard, (ii) any registry approved by CARB to act as a registry under the state's cap-and-trade program, (iii) through the CAPCOA GHG Rx and the San Diego County Air Pollution Control District (APCD), or (iv) if no registry is in existence as identified in options (i), (ii), or (iii), above, then any other reputable registry or entity that issues carbon offsets consistent with Cal. Health & Saf. Code section 38562(d)(1))., to the satisfaction of the Director of PDS.

7.1.8 Hazards and Hazardous Materials

CAP Mitigation Measure M-HAZ-1: During the environmental review process for future discretionary permits for all renewable energy projects, the County Guidelines for Determining Significance for Wildland Fire & Fire Protection shall be applied. When impacts are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: installation

of fire suppression systems; sufficient on-site water storage; inclusion of fire management zones; and funded agreements with fire protection districts.

7.1.9 Hydrology and Water Quality

No feasible mitigation available.

7.1.10 Land Use and Planning

No feasible mitigation available.

7.1.11 Noise

No feasible mitigation available.

7.1.12 Transportation and Traffic

CAP Mitigation Measure M-TRAF-1: During the environmental review process for future Major Use Permits for all large-scale renewable energy projects, the County Guidelines for Determining Significance for Trans7.1.13portation and Traffic shall be applied. When traffic impacts are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: traffic signal improvements; physical road improvements; street re-striping and parking prohibitions; fair share contributions toward identified, funded and scheduled projects; and transportation demand management programs.

7.1.13 Tribal Cultural Resources

CAP Mitigation Measure M-TCR-1 Facilitate the identification of tribal cultural resources through field studies, collaboration with agencies, tribes, and institutions, such as the South Coastal Information Center, while maintaining the confidentiality of sensitive cultural information.

CAP Mitigation Measure M-TCR-2   Require development to avoid tribal cultural resources, if feasible. If complete avoidance is not possible, require development to mitigate impacts to tribal cultural resources pursuant to Assembly Bill 52.

CAP Mitigation Measure M-TCR-3 Support the dedication of easements that protect tribal cultural resources.

CAP Mitigation Measure M-TCR-4   Protect significant tribal cultural resources through regional coordination and consultation with the Native American Heritage Commission and local tribal governments, including Senate Bill 18 and Assembly Bill 52 consultation.

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