1.10.9 Energy and Climate Change Subelement

Overview

Energy and Climate Change are not threshold program areas. The 1987 Regional Plan does not include goals, policies, or implementation measures specifically aimed at reducing greenhouse gas (GHG) emissions or adapting to potential effects of climate change. The idea of global climate change and GHG emissions was not yet in wide circulation in 1987. So while the current plan contains only an Energy Subelement, the Plan Update will contain an Energy *and Climate Change* Subelement.

The aim of the goal and five policies in the 1987 Regional Plan was to encourage energy conservation and recycling and to promote development of alternative energy sources. Though the energy efficiency and conservation measures (e.g., public transit programs, bicycle trail planning, and land-use provisions to manage and direct growth) in the 1987 Plan were not designed to reduce GHG emissions per se, they do help to reduce them.

Alternative 1 – Continuation of Existing Regional Plan

Summary

Alternative 1, the "no action" alternative, assumes the continuation of the goals, policies, regulations, and programs of the 1987 Regional Plan, including those in place for the existing Energy Subelement. The existing Regional Plan will fill the requirement of a Sustainable Communities Strategy for areas within California.

Goals and Policies

There are no changes proposed to this Subelement under Alternative 1.

Implementation Measures

There are no changes proposed to this Subelement under Alternative 1.

Alternative 2

Summary

Scientists generally concur that the earth's climate is changing through a buildup of gases that trap heat in the atmosphere. With the uncertainty about location, rate, and magnitude of possible climate-changing impacts, it is more important than ever to take steps to improve air quality and minimize GHG emissions. In August 2006 the California legislature passed the California Global Warming Solutions Act of 2006 establishing a comprehensive program of regulatory and market mechanisms to achieve real, quantifiable, cost-effective reductions in GHGs. In April 2007 Governor Jim Gibbons signed an executive order that created the Nevada Climate Change Advisory Committee (NCCAC). The executive order directed the Committee to propose recommendations by which GHG emissions can be further reduced in Nevada. In December 2009, the EPA made the finding that GHGs in the atmosphere threaten the public health and welfare of current and future generations. Recognizing that state and federal regulations relating to

climate change are evolving, Alternative 2 would establish TRPA's process for developing regulations to reduce regional GHG emissions.

Because energy is not a threshold program area, energy and climate change were not considered in the Pathway process. If Pathway had considered Energy and Climate Change, a desired condition for this subelement may have read, "The Tahoe Region will reduce its greenhouse gas emissions consistent with state and federal planning to reduce the scale and intensity of climate change effects on the Region, the country, and the world." In the absence of desired conditions targeting energy and climate change, the goals and policies proposed under Alternative 2 originate from the following Pathway desired conditions for Air Quality, Transportation, and Socioeconomics:

Air Quality 2 - Human and Ecosystem Health: Air quality in the Lake Tahoe Basin is healthy for humans and ecosystems.

Transportation 1 - Mobility/Socio-Economic Vitality: A multimodal transportation system that promotes viable alternatives for mobility needs, encourages alternative mode use, and decreases dependency on the private automobile. - (Non-Threshold)

Socio-Economics 3 - Community Design: The Lake Tahoe Basin has pedestrian-friendly, mixed-use town centers and other effective community designs with diverse businesses, residential areas, public spaces, and public services collocated with efficient transportation options.

Transportation and energy use (electricity and natural gas) account for most of the GHG emissions nationwide and in the Tahoe Region. While technological advances and policy advances at the state, national, and international level will be necessary to achieve substantial and lasting reductions in GHG emissions, the Regional Plan Update can contribute to GHG reductions through innovative policies that create communities that are designed to:

- decrease the use of single occupancy vehicle travel by
  - promoting smart growth, jobs/housing balance, transit-oriented development, and infill development through land use designations, zoning, and public-private partnerships; and
  - supporting transit, bicycle, and pedestrian connections through transit and trail planning and regional cooperation; and

- reduce energy consumption through promoting energy- and water-efficient buildings (e.g., LEED buildings) and green building ordinances

The Regional Plan Update can also contribute to GHG reductions through:

- supporting renewable energy generation
- reducing waste by promoting waste diversion, recycling, energy efficiency and energy recovery in cooperation with public services districts and private entities;
- community outreach and education to foster community involvement, input, and support for GHG reduction planning and implementation; and
- regional cooperation to find cross-regional efficiencies in GHG reduction investments.

Goals and Policies

Many of the goals and policies aimed at reducing GHG emissions are also contained in the Land Use Element ((Land Use, Community Design, and Air Quality Subelements) and the Transportation Element. Specifically, the goals and policies proposed in these elements are focused on reducing automobile trips and promoting mixed-use pedestrian and transit-oriented development through infill and redevelopment within the urban boundary.

Within the Energy and Climate Change sublement the intent of existing goal of promoting energy conservation and alternative energy use would be retained under a new policy to regional greenhouse gas emissions. Existing policies related to compliance with state and federal energy-efficiency standards, waste reduction, and use of alternative energy would be amended. Policies referencing air quality, fisheries, instream flows, and scenic quality would be removed as these would be covered in their respective subelements.

Six new policies would help TRPA to meet these goals. The first policy calls for the development and implementation of a Regional Sustainability Plan after adoption of the Regional Plan Update. The Regional Sustainability Plan would include at least the following components:

- a baseline emissions inventory for the Region
- quantified emissions reduction targets and timelines
- recommendations for new goals, policies, and implementation measures to meet emissions reduction targets
- recommendations for further research to fill information gaps regarding climate change
- a monitoring and evaluation strategy

A Regional Sustainability Plan is under development by a group of federal, state, local, and tribal governments, academic institutions, businesses, nonprofits, and the public. This group was formed to optimize resources and expertise among the many parties interested in issues related to climate change. The group will work together in developing and implementing the sustainability plan, conducting public outreach, and tracking and monitoring results. The Sustainability Plan will set GHG reduction targets by sector and identify implementation measures, in addition to those proposed in the Regional Plan Update, necessary to achieve reductions and to adapt to the potential effects of climate change. The Regional Plan may require further revision after completion of the Regional Sustainability Plan to adopt recommended policies and implementation measures Areas that this group will be addressing that are not directly addressed through the Regional Plan Update include waste reduction, municipal energy reduction targets, and adaptation strategies. .

Five additional policies proposed to contribute to the goal of reducing GHG emissions would:

- Require that TRPA environmental documents include an analysis of each project's GHG emissions
- Encourage more energy efficient building practices
- Educate residents and visitors on ways to reduce GHG emissions
- Encourage energy retrofits of residential buildings

- Reduce waste through requiring recycling or reuse of building materials.

A second goal to adapt to the regional effects of climate change would be added with a policy to use the monitoring and evaluation system as a means of developing and implementing climate change adaptation measures.

Seven new policies relating to transportation, air quality, and housing are also proposed in addition to those described above to help achieve GHG emissions. They are:

- Support and promote the use of low- and zero-emission vehicles (ZEV).
- Encourage new construction to include vehicle access to properly wired outdoor receptacles to accommodate ZEV and/or plug in electric hybrids (PZEV)
- Require that new developments incorporate transit measures into project designs that promote the use of alternative modes of transportation.
- Locate affordable housing in transit-oriented development whenever feasible.
- Include work-force housing in large projects in mixed-use areas, whenever feasible.
- Housing developments will comprise a mix of affordable and market rate units.

Implementation Measures

The following measures would have direct benefits to reducing GHG and other TRPA objectives:

- Promote energy conservation through application and enforcement of federal energy efficiency standards and California building code by local jurisdictions on the California side of the Basin.
- When found to be compliant with other threshold areas such as scenic, make design allowances for alternative energy sources, such as height allowances for solar panels.
- Require that new government offices incorporate renewable energy generation either on or off site to provide 15% or more of the project's energy needs.
- Change the existing solar design guideline into a standard to require, where feasible, that new buildings be designed to include optimal roof orientation (between 20 to 55 degrees from the horizontal) with sufficient south-sloped surface to allow for easy, cost-effective installation of solar energy systems in the future.
- Amend the TRPA Initial Environmental Checklist to include criteria for GHG emissions and require analysis of GHG emissions as part of over-all project EIS. Consider assessing a GHG mitigation fee.
- Reduce permit fees for projects implementing Green Building Design.
- Develop Regional Sustainability Plan outreach effort. Collaborate and incorporate efforts currently being developed by Regional Sustainability Plan initiative and TMPO.

- If GHG mitigation fees are assessed, release these fees for retrofitting older primary residential units.
- Update project criteria to include guidelines for documenting waste disposal and reuse.
- Limit use of bonus units to affordable housing in PTOD areas.
- Work with local jurisdictions to develop language to define large projects and set targets for work-force housing.
- Require new commercial and retail developments to provide prioritized parking for electric vehicles and vehicles using alternative fuels.
- Encourage new construction to include vehicle access to properly wired outdoor receptacles to accommodate ZEV and plug in electric hybrids (PZEV).
- Require inclusion of sidewalks, whenever possible, on both sides of all new street improvement projects, except where there are severe topographic or natural resource constraints.

Alternative 3

Summary

Alternative 3 is designed, in large part, to continue the implementation of the current system of regulations in the Tahoe Basin. It will allow additional allocations and other commodities to be provided for development. As under the other alternatives the Regional Plan will fill the requirement of a Sustainable Communities Strategy for areas within California.

Goals and Policies

There are no changes proposed to this Subelement under Alternative 3, except to re-name it the "Energy and Climate Change Subelement" (in recognition of the widespread acceptance of climate change) and assert that the existing Goals and Policies have both conservation and GHG-reducing values.

Implementation Measures

There are no changes proposed to this Subelement under Alternative 3.

Alternative 4

Summary

Under Alternative 4, the Energy and Climate Change Subelement proposes an approach nearly the same as Alternative 2 but with two additional measures that would reduce GHG emissions.

Goals and Policies

Under Alternative 4 two additional policies would be added. The first would be to work with regional school districts to identify funding sources and other incentives for school districts to develop transportation plans to reduce GHG emissions associated with transporting students to and from school. The second policy would require that the

Regional Plan and its implementing plans achieve and maintain LEED neighborhood certification.

Implementation Measures

Alternative 4 would include the following measures in addition to those in Alternative 2 (*note that the last one replaces, rather than adds to, its Alternative 2 counterpart*):

- Develop a program to assist regional school districts in reducing transportation-related GHG emissions as part of the Regional Sustainability Plan Initiative.
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- Incorporate planning elements required by LEED to achieve Neighborhood Certification into the Regional Plan
- incentives to jurisdictions based on the level of GHG emissions reduction.