

**June 7, 2010**

**SLV Solar/Transmission line Alternatives and Redundancy recommendations compiled by:**

**The San Luis Valley Solar/Transmission Work Group in cooperation with the San Luis Valley Ecosystem Council and Citizens for San Luis Valley Water Protection Coalition**

Transition of **energy infrastructure** is occurring rapidly in all sectors of our society and renewable, **clean** energy transmission and development has to be at the top of the list. The San Luis Valley (**SLV**), located in south central Colorado, is receiving national attention because this unique area, exemplifies the debate on how to move forward.

The SLV Solar/Tran work group, composed of citizens throughout the valley, has met monthly for a year to determine what will work for local communities to move forward towards energy independence that includes: autonomy, efficiency, reliability, security and redundancy and at the same time, protects the stability, including cost, of our agricultural industry and existing utility infrastructure. There are currently two utility providers operating in the SLV, **Xcel Energy of Minneapolis, MN** and SLV Rural Electric Cooperative (SLVREC), a **member of Tri-State Generation and Transmission Association, Inc. of Westminster, CO.**

Various options are included in these recommendations because public policy direction and advances in technology are **keys** to determining optimal approaches for future decision making.

**We believe the San Luis Valley can be a model for Colorado and the nation regarding development of an autonomous, locally generated power and energy grid that can support redundancy and also provide export of power for the larger energy utility infrastructure.**

**Baseline Mapping Tool-** The Solar/Tran Working Group developed a **comprehensive map** which includes land management classifications, existing electric utility infrastructure, solar radiant potential (**insolation**), current land uses, sensitive species **areas including** wetlands & riparian **areas on both** public and private land. It is critical policy makers and utilities refer back to this baseline map when making **siting** and design decisions.

**We bring the following recommendations:**

1. We support a Local Power (taxing) Authority (LPA) within the six SLV counties to remain autonomous and work in cooperation with utilities to oversee design, integration, and fair rate structure development of locally generated power.
2. We support a **phased approach** to the **siting** of solar **and other clean energy** facilities and upgrading/development of future transmission lines.
3. We support beginning with the upgrade of existing transmission lines into the SLV and implementing micro grid (**Smart Grid**) technologies to the 31 substations within the SLV **existing as of the date of this document.** We understand that the Poncha Pass substation must be included in this upgrade. (**Please refer to baseline map.**)
4. We support a Distributive Generation (DG) model that is supported by financial incentives, in combination with various forms of **solar power facility siting and siting of other clean energy facilities such as hydro, wind, geothermal, and small (5 MW) biomass.** Such facilities may range in scale from individual landowner solar irrigation to larger **5 MW to 40 MW PV solar or other clean energy installations** near the 31 existing substations, including solar gardens. **We will research and specify acceptable MW range for each substation.**
5. We also support, with scrutiny, either one 120 MW Solar facility located in each of the 5 counties (We are not including Mineral County here) cited for maximum solar radiation potential using baseline mapping tool **or** one- 250 MW (**estimated 2 sq mile area**)

**Concentrating Solar Thermal-electric power facility with integrated storage** located near the SLV sub-station. We understand that technological advances may make this a moot recommendation.

6. We support prudent development of solar energy on private land **provided the facility is appropriately sited**. Please refer to Baseline map **and our siting recommendations**.
7. We support the research and development of Concentrated Solar Facilities in Zone 5, near Pueblo and Walsenburg, where large scale substations such as Comanche already exist and are closer to point of use **and other major existing power transmission corridors**. (Front range Metro area **and High Plains Express Transmission Corridor, for example**.)
8. We support a **maximum** of 800 MW, (double circuit 230kv line) to be exported out of the San Luis Valley. This is five times the current rate of Maximum Peak Load used in the SLV. Concerns were raised that **power export in excess of 800 MW currently** would threaten the character, natural resources and current land use of this unique area. **This recommendation is consistent with a phased approach to clean energy development wherein technological advances in clean energy production and storage potentially could allow greater power exports, or alternatively lessen demands on SLV power exports**.
9. We support one 250 MW **Concentrating Solar Thermal-electric power facility (as mentioned above) with integrated storage sited near the San Luis Valley Substation southeast of Center, CO** that would meet stringent requirements and be suitable for this area. For example, water use, both quality and quantity, impacts to flyway populations (birds and bats), night sky alterations **and other potential impacts** must be researched and approved through the LPA.
10. We support locally generated renewable, **clean** energy power supply (e.g., solar, **hydro and other technologies** that is well-designed and brings the capacity for storage **and economical distribution** to ensure local redundancy and reliability.

### **Qualifications**

We will continue to research the costs/investments involved in our recommendations. The economics of energy production in all its forms is changing rapidly and dramatically throughout the world. Our access to energy economics expertise is substantial, and we will provide all reference information necessary to support the economic viability of our recommendations.

We will continue to research the rapidly evolving technology of solar and other clean energy, particularly as it relates to storage, DG, Smart Grid, business models and other modern energy solutions. Again, our access to energy technology expertise is substantial, and we will provide sound reasoning and projections for the technological evolution of clean energy solutions during the next decade. The rapid changes in clean energy technology further emphasize our recommendation for a phased approach to energy development that does not lock us into technology or energy and transmission planning scenarios that could rapidly become obsolete.

In coming months, the Solar/Tran work group will be providing far greater detail to these recommendations. Thanks for your patience as we continue to research and learn about the possibilities and limitations of our existing infrastructure. If you would like to join us, or if you have information and recommendations you would like to share, please contact us.