

2011-2012 GRAND JURY

SDR-2011-2012-001

REPORT

Trinity PUD Report

Let There Be Light

**GRAND JURY**  
**FINAL REPORT**

**TRINITY COUNTY GRAND JURY  
2011-2012**

**FILED**

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COUNTY OF TRINITY  
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**Special Districts Committee  
SDR 2011/2012-001  
Final Report**

**Trinity PUD Report  
Let There Be Light**

**Approved 04/04/2012**

  
**Patricia Zugg  
Foreperson**

## 2011-2012 Trinity County Grand Jury

### Special Districts Committee

#### Trinity PUD Report

##### Summary

Trinity Public Utilities District (TPUD) provides power to over 7000 customers in Trinity County (TPUD 2012 budget). Their primary goal is to prevent rate increases and in that regard they have done an admirable job. Trinity County residents and businesses have the lowest electric rates in the entire state. There is, however, another 700 to 800 customers in the county who do not have access to this inexpensive power as well as many more who are off-the-grid.

Despite all efforts put forth by the TPUD over the past thirty years, less than one third of the preferential energy allocated to the electrical customers of Trinity County is currently being used. The savings realized in 2009, as compared to California's Investor Owned Utilities rates of 15 cents per kilowatt hour, amounts to between five and seven million dollars (\$5,000,000-\$7,000,000) and the unused allocation amounts to twice that amount. Compared with investor owned utility customers, TPUD customers save between 35 and 50 percent on their electric bill each month.

The unutilized inexpensive power, available for use in Trinity County, provides a tremendous opportunity for economic development and expansion of residential and business development.

##### Background

In 1955, Congress passed the Trinity River Act providing dams, reservoirs and power plants on the Trinity River for the Central Valley Project (CVP). To compensate Trinity County residents, congress granted first preferential rights to 25% of the net electricity generated by these power plants to electricity users in Trinity County.

TPUD was formed as a public utility to take advantage of this inexpensive power source. The **sphere of influence** (SOI) granted TPUD by the Local Agency Formation Commission (LAFCO) includes all of Trinity County, but its **district service boundaries** excludes all customers west of South Fork Mountain, Post Mountain Community Services District, and the northwestern corner of Trinity County which includes the communities of Del Loma, Denny, Burnt Ranch and Salyer.

TPUD has been authorized by LAFCO to provide "its inhabitants with light, power, or heat, and may do all things necessary or convenient to the full exercise of the powers granted by this



authorization” (LAFCO Resolution 07-01). It should be noted, that TPUD has no authority to provide internet services without first requesting an expansion of its sphere of influence.

### **Method of Investigation**

The Committee:

1. Researched United States Bureau of Reclamation (USBR), Central Valley Project (CVP), Western Area Power Administration (WAPA) and TPUD documentation available in print form as well as on the internet.
2. Researched relevant laws and special legislation.
3. Interviewed relevant personnel in TPUD, LAFCO, and leaders in broadband implementation.

### **Discussion**

Prior to 1981, Trinity County residents were provided electricity by PG&E and CP National, both investor owned companies. Many residents were and still are off the grid. With the building of dams and the diversion of water from the Trinity River (The Trinity River Act of 1955), the federal government committed that 25% of the power generated by these dams would be available to “preference customers in Trinity County, California, for use in that county, who are ready, able and willing, within twelve months after notice of availability by the Secretary (of Interior), to enter into contracts for the energy”. The power was to be available at cost and marketed by Western Area Power Administration (WAPA), an agency of the U.S. Dept of Energy. In addition, the federal government agreed to make a payment in lieu of property tax to Trinity County of twenty-one thousand dollars (\$21,000) per year for the loss of property tax as a result of the filling of Trinity and Lewiston Lakes. There was no provision for escalation of this amount which remains at \$21,000 today.

Completed in 1964, the CVP diverted 75% to 90% of the inflow to Trinity Lake into the Sacramento River. Within 10 years it became apparent that significant damage was being done to the fish populations within the Trinity River. Various concerned groups petitioned the Federal Government to keep their promise to sustain the fishing which has resulted in the formation of the Trinity River Restoration Project. River flows diverted to the CVP have been reduced which has caused the price of federal power to increase somewhat.

Although Trinity County regularly received its payment in lieu of taxes, the committed low cost power was not available because PG&E and CP National were not willing to sell their distribution facilities to allow the formation of a utility district able to contract with the federal government. The oil embargo of 1973 and the overthrow of the Shah of Iran in 1979 caused an energy crisis which convinced CP National that they no longer wanted to be in the energy

business. In 1981, a group of civic minded citizens purchased the assets of CP National and formed a utility district, the purpose of which was to gain access to the power committed by the federal government for the citizens of Trinity County. An election was held forming The Trinity County Public Utilities District, currently known as Trinity Public Utilities District (TPUD), and authorizing it to enter into contracts for "first preference power" from the Western Area Power Administration (WAPA). Three (3) members were elected to the Board of Directors. Shortly thereafter the Board was expanded to five (5) members. The newly formed district covered an area of approximately 20 sq. miles providing service to Weaverville.

In 1983, because TPUD was the only entity able to contract with the federal government for power, it made application to the Trinity County Local Agency Formation (LAFCO) to establish its "sphere of influence" (SOI) to include the entire County of Trinity (TPUD Res83-06). With the formation in 1983 of the Hayfork Valley Public Utility District (HVPUD), TPUD relinquished from its SOI that territory serviced by HVPUD in 1985 (TPUD-LOI 12/4/85), but retained its SOI over the remainder of the county. The purpose of this was to prevent outside agencies from claiming rights to develop hydro-electric facilities within the county and shipping the energy out.

Two law suits in 1986 were to affect the cost of power in Trinity County. The first was filed by TPUD and HVPUD against WAPA regarding the calculation of "at cost" power. WAPA prevailed and the calculation of cost was based on total CVP expenditures and not just the expenditures associated with the Trinity Division facilities. The second was an attempt by HVPUD to condemn PG&E distribution equipment within HVPUD territory by eminent domain. This remained an open issue when in 1992 – 1993, HVPUD agreed to merge into TPUD. In a court mandated settlement, TPUD agreed to purchase PG&E distribution equipment which serviced the northeast portion of the county as well as that of the former HVPUD. Customers in the annexed areas pay a debt service component until the cost of acquisition of the PG&E equipment is paid off.

The newly proposed territory of TPUD was submitted to a vote and all affected areas voted to become customers of TPUD. The service area was extended to include all of Trinity County that had been serviced by PG&E Shasta Division and CP National. The areas west of South Fork Mountain and down river from Del Loma are provided power from the PG&E Humboldt Division, while Post Mountain has no distribution system at all.

TPUD successfully lobbied CVP power and water users to jointly support a legislative effort to compensate the residents of Trinity County for the damages caused by the CVP. The joint effort was successful; in June of 2000 Congress passed Public Law 106-377 (Appendix B Section 203) which provides for an annual payment to TPUD of \$540,000 (June 2000 price levels). The money is collected, 30% from CVP water users and 70% from CVP electric users. By 2012, this



annual payment has grown to \$710,020. These discretionary funds are used to reduce rates of TPUD customers. No benefits are accruing to those Trinity County residents not served by TPUD.

On September 29, 2004 the California State Legislature passed AB1189 which authorized the Trinity Public Utility District to administer Trinity County's financially endangered hospital until Jan. 1, 2008. The move was temporary until the county could find a permanent solution to the hospital's financial crisis. Local leaders wanted to form an independent local health care district to own and manage the former county hospital, and on April 17, 2006 the California State Legislature passed AB245 which allowed the election of directors to a special district and terminated TPUD's status as a temporary health care district. In partial payment for funds advanced by TPUD to support the Trinity Hospital, the County deeded four unimproved parcels of land to TPUD. On the 27<sup>th</sup> of February 2007, LAFCO recertified that the sphere of influence for TPUD be the entire county of Trinity with the exception of Post Mountain and that their authority is limited to providing heat, power and light to its inhabitants (LAFCO Resolution 07-01).

In 2010 and 2011, two related bills made their way through the California Legislature. The first, SB2514 signed into law in September, 2010, required the California Public Utilities Commission (CPUC) to establish targets for all utilities to achieve energy storage facilities. The second, SB2 signed into law in April, 2011, set a minimum of 33% of the power supplied by a utility to come from a renewable source. TPUD successfully lobbied the legislature to exclude TPUD from those requirements based on the fact that their entire power requirements are being met with low cost renewable federal preference power. To require TPUD to have energy storage facilities and to buy a third of their power from an outside source would likely double the county electric bills. As a hedge against the possibility that they might not get the exclusions, TPUD began building a small 2.2 megawatt hydro facility at Lewiston dam. The power from this facility will now be sold to Redding as TPUD no longer needs the output at this time.

Also In 2010, TPUD completed a direct link to the WAPA high voltage transmission lines and the power generated at the Trinity River diversion power plants, thus enabling it to avoid paying transmission charges from the grid. This created a savings of nearly \$1 Million per year in expenses. It does, however, reduce TPUD's source of power to a single (potentially more dependable) line, as the other sources to the grid have been severed. There is a PG&E owned link at Forrest Hill which could be activated in an emergency, but there is a previous agreement with PG&E that states that the equipment could be removed at any time. According to TPUD sources, discussions with PG&E have assured them that in an emergency, the link could be re-established in about two days time.

Trinity County residents are currently using approximately one third of the inexpensive power to which they are entitled. TPUD has forecast that the load in Trinity County will increase approximately 1% per year. This means that for the foreseeable future every customer within Trinity County should have access to almost three times as much inexpensive power as they are currently using. Trinity County residences are entitled to so much more inexpensive power that they may be interested in electric vehicles. For example, the Electric Power Research Institute recently postulated that a Ford Focus requires 22.7 kilowatt-hours of electricity for a 100 mile drive. At the price of power, within the boundaries of TPUD's service area, that equates to less than **Seventy Five Cents Per Gallon** of gas equivalent.

The Trinity Public Utility District has successfully kept the cost of electricity the lowest in the state, however, in order to continue this success it is necessary that load continue to grow within the county. Efforts to include all residents within the county would increase the load by another 10 to 15%. However a direct connection between TPUD and those customers outside its service boundary is financially unfeasible. Rather, the establishment of a Community Choice Aggregation for those areas serviced by Humboldt PG&E would provide inexpensive power to them while retaining the wheeling services of PG&E.

TPUDs ability to keep rates low in the future is dependent in part upon load growth. There are multiple factors that adversely limit load growth in Trinity County. They include, but are not limited to, the amount of private land available for development, outdated planning documents, inadequate telecommunications/internet infrastructure and our remote location.

### **Findings/Recommendations**

#### **Finding 1:**

LAFCO Resolution No. 07-01, which establishes the sphere of influence and authorized powers for the TPUD, limits its activity to "provide power, light and heat." Communications (i.e. internet) is not one of the authorities granted. The public needs to be aware of the limited scope of activities that the TPUD can be involved in without first expanding the authority granted to it by LAFCO and the Public Utilities Commission.

#### **Recommendation 1:**

TPUD should document, disclose and publicize its activities each year.

#### **Finding 2:**



All electricity customers within the county are not currently receiving the benefit of low cost federal power as provided for in the Trinity River Act of 1955.

**Recommendation 2:**

The TPUD should create a Community Choice Aggregation for the non-served portions of Trinity County and contract with PG&E to wheel TPUD power to those customers that live outside TPUD service territory, but within TPUD's sphere of influence, thus increasing the benefits more broadly.

**Finding 3:**

Those Trinity County residents off the grid neither receive benefits from their right of use of preferential power nor from the compensation for damages paid by other CVP water and power customers.

**Recommendation 3:**

TPUD should devote most if not all future US Bureau of Reclamation payments toward expanding service to the underserved areas and those currently off the grid until such time as all residences of Trinity County that can be served are being served.

**Finding 4:**

TPUD accepted four parcels of unimproved land from Trinity County as partial payment for funds advanced to support the Trinity Hospital. Ownership of the unimproved land is not germane to providing TPUD Customers with light, power or heat.

**Recommendation 4:**

TPUD should sell the parcels, thus placing them on the tax roll, and return the funds to TPUD customers.

**Finding 5:**

TPUD's completion of the Direct Connect to WAPA decreased the California Independent System Operator charges by as much as a million dollars a year and eliminated TPUD customer's reliance on PG&E's sometimes unreliable service.

**Recommendation 5:**



TPUD should, without delay, enter into a stand-by agreement with PG&E that would provide TPUD with the immediate ability to utilize PG&E power during an extended outage.

**Finding 6:**

The extent of the benefit being realized by TPUD customers and the additional benefits that could be utilized from their use of Preferential Power is not well known.

**Recommendation 6a:**

TPUD should provide an annual benefits statement to each customer along with their bill.

**Recommendation 6b:**

TPUD should publicize an accounting of the total realized and unrealized benefits each year.

**Finding 7:**

Through the good efforts of those that formed and served the TPUD throughout the years Trinity County residents are making beneficial use of approximately one third of the Preferential Power made available by the Trinity River Act of 1955. If TPUD were to act on all the above recommendations, that beneficial use might go up as high as 50%. At the current rate of growth, it will take decades to reach the level of commitment made in the Trinity River Act of 1955.

**Recommendation 7:**

The Trinity County Board of Supervisors (BOS) and TPUD should do everything in their power to facilitate and encourage the consumption of all available Preferential Power.

7a. The BOS should evaluate the feasibility of building a pumped storage hydro electric facility and publicize the results. A properly sized Pumped Storage Facility could make beneficial use of some of the excess power allocation, while creating good paying jobs and a substantial increase in the tax base.

7b. The BOS should have the County's General Plan updated, specifically the housing and land use elements, with the intent of making it both easier and less expensive for housing and other developments, thus increasing the employment base, the tax base and expanding the benefits realized.

7c. The BOS should encourage the location of energy intensive industries, such as an internet server farm, thus expanding the tax base and employment opportunities.

7d. The BOS should aggressively pursue grants which aid in the financing of high speed internet infrastructure.

7e. TPUD should assess the feasibility of installing charging stations in key locations around the county to encourage the use of electric vehicles. This bold move could make Trinity County *the* place to visit for curious tourists with electric/hybrid cars throughout the country.

### **Responses Required**

In accordance with the California Penal Code 933.05, a response is required as indicated below:

Respondent	Findings/Recommendations	Due Date*
TPUD BOD	1, 2, 3, 4, 5, 6a, 6b, 7e	90 days
County BOS	7a, 7b, 7c, 7d	90 days

\* Number of days after filing date of this Grand Jury report.

The governing bodies indicated above should be aware that comment or response of the governing body must be conducted subject to notice, agenda, and open meeting requirements of the Brown Act.

### **Glossary:**

#### **Central Valley Project:**

The Central Valley Project (CVP) is a Bureau of Reclamation federal water project in the U.S. state of California. It was devised in 1933 in order to provide irrigation and municipal water to much of California's Central Valley—by regulating and storing water in reservoirs in the water-rich northern half of the state, and transporting it to the water-poor San Joaquin Valley and its surroundings by means of a series of canals, aqueducts and pump plants, some shared with the California State Water Project. Many CVP water users are represented by the Central Valley Project Water Association. In addition to water storage and regulation, the system has a hydroelectric capacity of over 2,000 megawatts, provides recreation, and promotes flood control with its twenty dams and reservoirs.

#### **Shasta/Trinity River Divisions:**



The Shasta and Trinity River Divisions catch the headwaters of the network of Central Valley Project waterways and channel the water southward. Both divisions are part of the Central Valley Project. They are close to each other, with the Shasta Division on the Sacramento River about 10 miles north of Redding and the Trinity River Division on the Trinity River about 25 miles northwest of Redding. Surplus water from the Trinity River Basin is stored, regulated, and diverted through a system of dams, reservoirs, tunnels, and power plants into the Sacramento River for use in water-deficient areas of the Central Valley Basin. Water is used for irrigation, power generation, navigation flows, environmental and wildlife conservation, and municipal and industrial needs.

#### **Trinity River Division Power Plants:**

Trinity Dam stores water from the Trinity River in Clair Engle Lake. Water is released through Trinity power plant. Downstream, Lewiston Dam diverts water from the Trinity River, through the Lewiston power plant, into Clear Creek Tunnel for the eleven-mile trip through the Trinity Mountains.

Water enters Whiskeytown Lake through Judge Francis Carr Powerhouse. Some of the water diverts from the lake into the Clear Creek Unit South Main Aqueduct to irrigate lands in the Clear Creek Unit. The rest flows through the Spring Creek Power Conduit and power plant into Keswick Reservoir in the Shasta Division. From there, it goes through Keswick power plant, then south in the Sacramento River.

#### **California Independent System Operator:**

The California Independent System Operator Corporation (ISO) manages the flow of electricity across the high-voltage, long-distance power lines that make up 80 percent of California's power grid. As the impartial grid operator, it grants equal access to 25,865 circuit-miles of power lines and reduces barriers to diverse resources competing to bring power to customers. The ISO opened its northern and southern California control centers in 1998 when the state restructured its wholesale electricity industry.

#### **Community Choice Aggregation:**

When California deregulated electricity in 1997, many Californians switched to buy "green" energy. After the energy crisis of 2000-01, consumer choice of electricity providers was suspended. Most Californians now get their electricity from the same utilities that provided it before deregulation. Community Choice Aggregation offers an opportunity for Californians to once again choose their electric provider and the source of their electricity. Community Choice Aggregation (CCA) enables California cities and counties – or groups of cities and counties – to supply electricity to the customers within their borders.

#### **Wheeling power:**

In electric power transmission, **wheeling** is a term used to describe either of the following:

- The act of transporting electric power (megawatts or megavolt-amperes) over transmission lines, or;
- The act of providing the service of transporting electric power over transmission lines.

Electric power networks are divided into transmission and distribution networks. Transmission lines move electric power between generating facilities and substations, usually in or near population centers. From substations, power is sent to users over a distribution network. A transmission line might move power a few miles or hundreds of miles.

Since prices to move power are based on congestion in transmission line networks, utilities try to charge customers more to use power during peak usage (demand) periods. This is accomplished by installing time-of-use meters to recover wheeling costs.

Since the direct-link was completed, TPUD has greatly reduced its wheeling costs unless it chooses to bring in outside power in the event of an extended power outage.

### **Server Farm:**

Also referred to as *server cluster*, *computer farm* or *ranch*. A *server farm* is a group of networked servers that are housed in one location. A server farm streamlines internal processes by distributing the workload between the individual components of the farm and expedites computing processes by harnessing the power of multiple servers. The farms rely on load-balancing software that accomplishes such tasks as tracking demand for processing power from different machines, prioritizing the tasks and scheduling and rescheduling them depending on priority and demand that users put on the network. When one server in the farm fails, another can step in as a backup.

Combining servers and processing power into a single entity has been relatively common for many years in research and academic institutions. Today, more and more companies are utilizing server farms as a way of handling the enormous amount of computerization of tasks and services that they require.

A *Web server farm*, or *Web farm*, refers to either a Web site that runs off of more than one server or an Internet Service Provider (ISP) that provides Web hosting services using multiple servers.