

RESOLUTION NO. 2013 - 109

**RESOLUTION ADOPTING THE TURLOCK IRRIGATION DISTRICT'S
RENEWABLE ENERGY RESOURCES PROCUREMENT PROGRAM**

WHEREAS, Senate Bill 1078 was signed into law by California Governor Gray Davis on September 12, 2002; and became effective January 1, 2003; and

WHEREAS, Senate Bill 1078 requires the governing body of each local publicly owned electric utility to implement and enforce a Renewable Portfolio Standard; and

WHEREAS, Turlock Irrigation District (TID) adopted said policy on February 3, 2004, and amended said policy on June 27, 2006, July 17, 2007, and April 14, 2009 in accordance with the requirements of Senate Bill 1078; and

WHEREAS, Senate Bill 2 (First Extraordinary Session) was signed into law by California Governor Edmund G. Brown on April 12, 2011; and

WHEREAS, Senate Bill 2 (First Extraordinary Session) establishes that the governing board of the local publicly owned electric utility shall adopt a renewable resources procurement plan; and

WHEREAS, the California Energy Commission adopted final regulations, Enforcement Procedures for the Renewables Portfolio Standard for Local Publicly Owned Electric Utilities, which implements the requirements of Senate Bill 2 (First Extraordinary Session) on October 1, 2013; and

WHEREAS, Provisions in the Enforcement Procedures for the Renewables Portfolio Standard for Local Publicly Owned Electric Utilities establish that the governing body of a local publicly owned electric utility must adopt a Renewable Resources Procurement Plan within 60 days of the effective date of said regulations (December 1, 2013).

NOW THEREFORE, BE IT RESOLVED by the Board of Directors of the Turlock Irrigation District that the TID Renewable Energy Resources Procurement Plan, which is attached and made part of this resolution, is hereby adopted effective November 26, 2013, in accordance with the requirements of Senate Bill 2 (First Extraordinary Session).

Moved by Director Santos, seconded by Director Fernandes, that the foregoing resolution be adopted.

Upon roll call the following vote was had:

Ayes:	Directors Fernandes, Santos, Alamo, Macedo, Frantz
Noes:	Directors None
Absent:	Directors None

The President declared the resolution adopted.

I, Tami Wallenburg, Executive Secretary to the Board of Directors of the TURLOCK IRRIGATION DISTRICT, do hereby CERTIFY that the foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of said Board of Directors held this 26th day of November, 2013.



Executive Secretary to the Board of
Directors of the Turlock Irrigation District



TURLOCK IRRIGATION DISTRICT RENEWABLE RESOURCES PROCUREMENT PLAN

INTRODUCTION

Senate Bill (SB) X1 2. Enacted in the 2011-2012 First Extraordinary Session of the California Legislature modified the state's renewable portfolio standard (RPS) program and set forth new RPS requirements applicable to publicly owned utilities (POUs). TID, as a POU, must comply with the provisions of SB X1 2

The TID Renewable Resources Procurement Plan consists of:

- A. Purpose of the Procurement Plan
- B. Compliance Periods
- C. Procurement Targets
- D. Portfolio Content Category definitions
- E. Portfolio Content Category requirements
- F. TID Renewable Portfolio
- G. TID Renewable Projections, Compliance Plan
- H. Optional Compliance Measures
- I. Reporting

A. PURPOSE

In order to comply with Public Utilities Code §399.30(a), which states "In order to fill unmet long-term generation resource needs, each local publicly owned electric utility shall adopt and implement a renewable energy resources procurement plan that requires the utility to procure a minimum quantity of electricity products from eligible renewable energy resources, including renewable energy credits, as a specified percentage of total kilowatt-hours sold to the utility's retail end-use customers..." in order to achieve the procurement targets specified in SB X1 2.

B. Compliance Periods

- a. Compliance Periods- Defined in Public Utilities Code § 399.30(b)
 - i. Compliance Period 1: January 1, 2011 to December 31, 2013, inclusive
 - ii. Compliance Period 2: January 1, 2014 to December 31, 2016, inclusive
 - iii. Compliance Period 3: January 1, 2017 to December 31, 2020, inclusive
 - iv. Compliance Periods are annual starting in 2021.

C. Procurement Targets of Renewable Energy Resources for each Compliance Period

- a. Renewable Energy Resources Procurement Targets- Defined in Public Utilities Code §399.30 (c)(1) and (2)
 - i. During Compliance Period 1, January 1, 2011 to December 31st, 2013, TID shall procure eligible renewable energy resources equivalent to an average of twenty percent (20%) of retail sales.
 - ii. By the end of Compliance Period 2, December 31, 2016, TID shall procure eligible renewable energy resources equivalent to not less than twenty five percent (25%) of retail sales.
 - iii. By the end of Compliance Period 3, December 31, 2020, TID shall procure eligible renewable energy resources equivalent to not less than thirty three percent (33%) of retail sales. TID shall demonstrate that it has procured electricity products with that period to demonstrate that sufficient procurement to meet or exceed the sum of the following:
 - 1. Twenty seven percent (27%) of 2017 retail sales,
 - 2. Twenty nine percent (29%) of 2018 retail sales,
 - 3. Thirty one percent (31%) of 2019 retail sales, and
 - 4. Thirty three percent (33%) of 2020 retail sales

- iv. Commencing in 2021, and annually thereafter, TID shall procure eligible renewable energy resources equivalent to not less than thirty three percent (33%) of retail sales.

D. Portfolio Content Categories

- a. Portfolio Content Category 1 (PCC1)- (PUC § 399.16 (b)(1)(A,B))-Resources in this category must meet the following criteria:
 - i. Have a first point of interconnection with a California balancing authority, have a first point of interconnection with distribution facilities used to serve end users within a California balancing authority area, or are scheduled from the eligible renewable energy resource into a California balancing authority without substituting electricity from another source. The use of another source to provide real-time ancillary services required to maintain an hourly or sub-hourly import schedule into a California balancing authority shall be permitted, but only the fraction of the schedule actually generated by the eligible renewable energy resource shall count toward this portfolio content category.
 - ii. Have an agreement to dynamically transfer electricity to a California balancing authority
- b. Portfolio Content Category 2 (PCC2)- (PUC § 399.16 (b)(2))-Resources in this category are:
 - i. Firmed and shaped eligible renewable energy resource electricity products providing incremental electricity and scheduled in to a California balancing authority.
- c. Portfolio Content Category 3 (PCC3)- (PUC § 399.16 (b)(3))- Resources in this category include:
 - i. Eligible renewable energy resource electricity products or any fraction of the electricity generated, including unbundled renewable energy credits that do not qualify as PCC1 or PCC2.

d. Portfolio Content Category 0 (PCC0)- (PUC § 399.16 (d))- Resources in this category include:

i. Any contract or ownership arrangement originally executed prior to June 1, 2010 for eligible renewable energy resources, and shall count in full towards the procurement requirements, if all the conditions below are met. Grandfathered resources shall be counted for RPS compliance without regard to the limitations on the use of each portfolio content category as described in section E.

1. The renewable energy resource was eligible under the rules in place as of the date when the contract was executed.
2. Any contract amendments or modifications occurring after June 1, 2010, do not increase the nameplate capacity or expected quantities of annual generation, or substitute a different renewable energy resource.
3. The duration of the contract may be extended if the original contract specified a procurement commitment of fifteen or more years.
4. "Eligible renewable energy resource" means an electrical generating facility that meets the definition of a "renewable electrical generation facility" in section 25741 of the Public Resources Code, subject to the following: " A facility approved by the governing board of a local publicly owned electric utility prior to June 1, 2010, for procurement to satisfy renewable energy procurement obligations adopted pursuant to former section 387, shall be certified as an eligible renewable energy resource by the Energy Commission pursuant to this article, if the facility is a "renewable electrical generation facility" as defined in section 25741 of the Public Resources Code." (§ 399.12(e) (1) (C)).¹

E. Portfolio Content Category Requirements

¹ It should be noted that even though Publicly Owned Utilities were able to count Large Hydro under former section 387, this precludes Large Hydro (over 30 MW) from counting towards RPS requirements, as Public Resource Code 25741 defines "renewable electrical generation facility" as follows : "The facility uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and any additions or enhancements to the facility using that technology.

- a. Compliance Period 1 Procurement Requirements: For Compliance Period 1, TID shall procure not less than fifty percent (50%) of the eligible renewable resources electricity products associated with contracts executed after June 1, 2010 from PCC 1, and not more than twenty five percent (25%) from PCC 3.
- b. Compliance Period 2 Procurement Requirements: For Compliance Period 2, TID shall procure not less than sixty five percent (65%) of the eligible renewable resources electricity products associated with contracts executed after June 1, 2010 from PCC 1, and not more than fifteen percent (15%) from PCC 3.
- c. Compliance Period 2 Procurement Requirements: For Compliance Period 3, TID shall procure not less than seventy five percent (75%) of the eligible renewable resources electricity products associated with contracts executed after June 1, 2010 from PCC 1, and not more than ten percent (10%) from PCC 3.
- d. Annual Procurement Requirements After 2020: Beginning in calendar year 2021, TID shall procure not less than seventy five percent (75%) of the eligible renewable resources electricity products associated with contracts executed after June 1, 2010 from PCC 1, and not more than ten percent (10%) from PCC 3.
- e. Requirements Matrix:

RPS Requirements Summary Matrix				
Compliance Period	Year	CEC Renewables Procurement Target	Portfolio Balancing	
			PCC 1	PCC3
Compliance Period 1	2011	Average of 20%	≥ 50%	≤ 25%
	2012			
	2013			
Compliance Period 2	2014	20%	≥ 65%	≤ 15%
	2015	20%		
	2016	25%		
Compliance Period 3	2017	27%	≥ 75%	≤ 10%
	2018	29%		
	2019	31%		
	2020	33%		
Annual Period	2021	33%	≥ 75%	≤ 10%
Annual Period	Etc.	33%	≥ 75%	≤ 10%

F. TID Renewable Portfolio

- a. Tuolumne Wind Project: 136.6 MW Wind Farm owned and operated by TID.
 - i. Location: Klickitat County, WA
 - ii. Expected Annual Generation: 432,851 Megawatt-hours (MWh)
 - iii. Contract/Ownership Start Date: May 2009
 - iv. Portfolio Content Category: PCC 0 (Grandfathered)

- b. NCPA Geothermal: TID owns a share of the NCPA Geothermal Plants 1 & 2
 - i. Location: Middletown, California
 - ii. Expected Annual Generation: Roughly 50,000 MWh²
 - iii. Contract/Ownership Start Date: 1986
 - iv. Portfolio Content Category: PCC 0 (Grandfathered)

- c. TID Small Hydro: TID owns and operates a fleet of 4 small Hydro units along the Tuolumne River and the TID Canal system (La Grange, Dawson, Turlock Lake, and Hickman). TID also operates, maintains, and has rights to the electrical output of 5 other small hydro units external to the TID service area (Frankenheimer, Woodward, Parker, Canal Creek, and Fairfield).
 - i. Location: California
 - ii. Expected Annual Generation: 80,000 MWh³
 - iii. Contract/Ownership Start Date:
 1. La Grange - 1907
 2. Dawson- 1983
 3. Turlock Lake- 1980
 4. Hickman- 1979
 5. Frankenheimer- 1983
 6. Woodward- 1982
 7. Parker- 1982
 8. Canal Creek- 1983
 9. Fairfield- 1983
 - iv. Portfolio Content Category: PCC 0 (Grandfathered)

² The geothermal project generation is expected to diminish gradually over time due to the slow degradation of the steam field used to power the units. This number represents the average expected generation from 2011-2020.

³ Based on average hydro conditions

- d. TID Solar Facility: TID owns a 70 kW solar facility that that has been integrated into the TID parking structure.
- i. Location: California
 - ii. Expected Annual Generation: 60 MWh
 - iii. Contract/Ownership Start Date: 2009
 - iv. Portfolio Content Category: PCC 0 (Grandfathered)

G. TID Renewable Projections, Compliance Plan⁴

TID RPS Compliance Projection										
Category	Compliance Period 1			Compliance Period 2			Compliance Period 3			
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Retail Sales (MWh)	1,894,540	1,945,968	2,017,051	2,059,462	2,092,725	2,126,207	2,160,103	2,194,434	2,230,003	2,266,051
RPS Requirements	378,908	389,194	403,410	411,892	418,545	531,552	583,228	636,386	691,301	747,797
PCC0	526,351	454,940	514,000	520,000	520,000	520,000	520,000	520,000	520,000	520,000
Annual Surplus/(Deficit)	147,443	65,746	110,590	108,108	101,455	(11,552)	(63,228)	(116,386)	(171,301)	(227,797)
Compliance Period Carryover	323,779			521,790			(56,921)			

TID shall retain exclusive control and discretion over the mix of eligible renewable energy resources procured by TID and those additional generation resources procured by TID for purposes of ensuring resource adequacy and reliability, and the reasonable costs incurred by TID for eligible renewable energy resources owned by it, pursuant to § 399.30(m)

H. Optional Compliance Measures

- a. Excess Procurement: TID can apply excess procurement from one compliance period to a subsequent compliance period, subject to the following provisions:
- i. Procurement classified in PCC3 may not be counted as excess procurement
 - ii. Procurement from contracts less than 10 years may not be counted as excess procurement.
 - iii. Excess Procurement accrual may start no earlier than January 1, 2011.

⁴ RPS projections based average hydro and wind conditions, and base case retail load projections

- iv. Excess procurement may be applied towards any future compliance period, including compliance years following 2020.
- v. Excess procurement shall be calculated as follows:

- 1. Compliance Period 1

$$\text{Excess Procurement} = (EP_{2011-2013}) - (RPS_{2011-2013} + S3_{2011-2013} + STC_{2011-2013})$$

EP_x = Electricity products retired and applied toward the RPS procurement target for the compliance period X

RPS_x = The RPS procurement target calculated in section C for compliance period X

S3_x = Retired PCC 3 RECs in excess of the maximum allowed per section E

STC_x = All electricity products that meet the criteria of section E, are associated with contracts less than 10 years in duration, and are retired and applied toward the RPS procurement target for compliance period X

- 2. Compliance Period 2

$$\text{Excess Procurement} = (EP_{2014-2016}) - (RPS_{2014-2016} + S3_{2014-2016} + STC_{2014-2016})$$

- 3. Compliance Period 3

$$\text{Excess Procurement} = (EP_{2017-2020}) - (RPS_{2017-2020} + S3_{2017-2020} + STC_{2017-2020})$$

- b. Waiver of Timely Compliance: Enforcement of timely compliance shall be waived if TID demonstrates that any of the following conditions are beyond the control of TID and will prevent timely compliance:

- i. *Inadequate Transmission:* There is inadequate transmission capacity to allow for sufficient electricity to be delivered from the TID Renewable Portfolio. Consideration of:
 - 1. Whether TID has undertaken, in a timely fashion, reasonable measures under its control and consistent with obligations under local, state, and federal laws and regulations, to develop and construct new transmission lines or upgrades to existing lines intended to transmit electricity generated by the TID Renewable Portfolio
 - 2. Whether TID has taken all reasonable operational measures to maximize cost-effective deliveries of electricity from eligible renewable energy resources in advance of transmission availability.

- ii. *Permitting, interconnection, or other delays*, that delay eligible renewable resource projects, or there is an insufficient supply of eligible renewable energy resources available to TID. Consideration should be given whether TID has:
 - 1. Prudently managed portfolio risks;
 - 2. Sought to develop its own renewable resources, transmission to connect to renewable resources, or energy storage used to integrate renewable energy resources.
 - 3. Procured an appropriate minimum margin of procurement above the minimum procurement level.
 - 4. Taken reasonable measures to procure cost effective distributed generation and allowable renewable energy credits.

 - iii. *Unanticipated curtailment of renewable energy resources necessary to address the needs of a balancing authority.*

 - iv. Other actions beyond the control of TID which impact timely deliveries of eligible renewable energy resources.
- c. Cost Limitations- TID is committed to make every reasonable effort at complying with the requirements of the 33% RPS, but will not do so “at any cost”, or unreasonable or imprudent expense to TID’s ratepayer owners. As such, the TID Board of Directors has authority to invoke a “not to exceed” cost limitation on TID’s RPS expenditures. In considering these cost limitations, the Board shall ensure that the cost limitation measures are consistent with PUC §399.15(c), §399.30(d)(3), and the CEC RPS Regulations (3206 (a)(3), and ensure the following:
- i. The level prevents disproportionate impacts.
 - ii. The costs of all procurement credited toward achieving the RPS are counted toward the limitation.
 - iii. Procurement expenditures do not include:
 - 1. Imbalance energy charges
 - 2. Sale of excess energy
 - 3. Decreased generation from existing sources
 - 4. Transmission upgrades
 - 5. Costs of relicensing any POU-owned hydroelectric facilities
 - iv. That the expected cost of building, owning, and operating eligible renewable energy sources be considered.

- v. That a plan of action to implement in the event the cost limitations are invoked be considered.
- d. Prior Deficits: In no event shall a deficit from a prior compliance periods be added to future compliance periods
- e. Portfolio Balance Requirement Reduction: TID may reduce the portfolio balance requirement for PCC1 for a specific Compliance Period, consistent with PUC §399.16(e) and the following:
 - i. The need to reduce the portfolio balance requirements for PCC1 must have resulted because of circumstances beyond TID's control.
 - ii. TID may not reduce its portfolio balance requirements for PCC1 below sixty-five percent (65%)
 - iii. Should TID reduce its portfolio balance requirements for PCC1, it must:
 - 1. Adopt the changes at a publicly noticed meeting with at least 10 calendar days advance notice to the CEC including:
 - a. The compliance period for which the reduction may be adopted.
 - b. The level to which a POU has reduced the requirement.
 - c. The reason or reasons the POU has proposed for adopting the reduction.
 - d. An explanation of how the needed reduction resulted from conditions beyond TID's control as provided in Section H (b).
 - 2. Send the CEC a revised Renewable Resources Procurement Plan.
- f. Historical Carryover: TID, as an early adopter in renewable energy, can apply historical procurement over and above the requirements delineated in Section 3206 (a) (5) for use in Compliance Period 1.

I. Reporting

- a. Deliberations on Procurement Plan (399.30(f)):
 - i. *Public Notice*: TID shall post notice as required by the Public Utilities Code (30 days in advance) if the TID Board will deliberate on this Procurement Plan.

- ii. *Notice to the California Energy Commission (“CEC”)*: Contemporaneous with the posting of a notice for deliberations, TID shall notify the CEC of the date, time, and location of the meeting so that the CEC can post publicly on the CEC website.
- iii. *Documents and Materials Related to the TID Procurement Plan*: TID shall make available publicly, via electronic copy, all information and documents related to the TID Procurement Plan to the CEC. In addition, TID will make this information available to the public.

b. Compliance Reporting

- i. TID shall submit the required reports to the CEC per Section 3207 of the California Code of Regulations, Title 20, Division 2, Chapter 13 (*Enforcement Procedures for the Renewables Portfolio Standard for Local Publicly Owned Electric Utilities*).