



**WATER & POWER**

*Serving Central California since 1887*



# **2024 ANNUAL REPORT**

## **Turlock Irrigation District**



# VALUE OF

# TID

## Message from the General Manager



Brad Koehn  
General Manager | Turlock Irrigation District

It was a great honor to be appointed the General Manager of Turlock Irrigation District (TID) in June 2024.

I had the privilege of taking over the role, from a strong and passionate leader, Michelle Reimers.

2024 was a year of evaluation, innovation, and restoration, staying true to our commitment to demonstrating the value of TID to those we serve. In the 2024 Annual Report you will read the ways in which TID explored avenues to optimize our existing resources and implemented emerging technology to maximize our operations and infrastructure to maintain our mission of reliability and affordability.

Innovative ventures like, Project Nexus and impactful initiatives like habitat restoration in the Tuolumne River are just two examples you'll find of TID's mindful, yet forward-thinking approach to meet the needs of today and demonstrate of how we are looking to create solutions for the issues of tomorrow. The Don Pedro Life Extension Project reached new milestones in 2024 and our customer engagement activities included a

valuable customer satisfaction survey, and a website redesign that improved the customer experience by updating the functionality, navigation, and accessibility of the site.

Additionally, in 2024, we concluded a cost of service study, evaluating all 27 TID rate types. It was determined that for the first time in 10 years, a rate increase was needed to maintain our current level of reliability, to carry out needed capital improvements, and to increase our use of renewable energy to meet State mandates. Even with a rate increase, TID continues to have the lowest utility rate in the greater Central Valley area, providing a great value to our customers.

The remarkable efforts that took place throughout 2024 would not have been possible without our esteemed employees who understand the importance of upholding a commitment to excellence, a desire to push the status quo, and to making decisions with our customers' best interests in mind.

## TID Management Team



From left to right:

- | **Michael Cooke**, Director of Water Resources & Regulatory Affairs
- | **Tim Payne**, Assistant General Manager of Power Supply
- | **Jorian Reed**, Director of Human Resources
- | **Brad Koehn**, General Manager
- | **Josh Weimer**, Director of External Affairs
- | **Tou Her**, Assistant General Manager of Water Resources
- | **Brian Stubbett**, Assistant General Manager of Financial Services & CFO
- | **Manjot Gill**, Assistant General Manager of Electrical Engineering & Operations

# VALUE OF TID

## TID QUICK FACTS



458 employees



662 sq miles electric service area



240,000 electric population served



307 sq miles irrigation service area



4,700 irrigation accounts



250 miles of gravity-fed canals



146,791 irrigated acres



The Value of TID can be seen through our ongoing commitment to the restoration of healthy riparian habitats. In 2024, TID, along with our partners on the Tuolumne River, MID and the San Francisco Public Utilities Commission, provided more than 7.5 acres of mainstem restoration, more than 2.5 acres of floodplain habitat and more than 50,000 cubic yards of spawning gravel. These actions are expected to result in a five-fold increase of trout and salmon habitat upstream of Old La Grange Bridge.

### 2024 WATER YEAR

**48** inches

available water per parcel

**89** %

of normal water year

**92.1** %

precipitation compared to average year

**1,524,798** AF

of water at Don Pedro storage at the end of the water year

### 2024 POWER YEAR

**\$5.2** million

Energy Imbalance Market benefit to the District

**46**

triple digit days

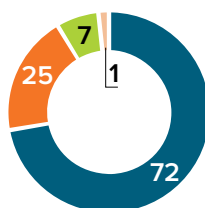
**713.9** MW

peak load in July

**61** minutes

System Average Interruption Duration Index (SAIDI)

### ELECTRIC SERVICE CUSTOMER BREAKDOWN, %



- Residential
- Other (includes agricultural and municipal water pumping and street lighting)
- Commercial
- Industrial



# VALUE OF INNOVATION

## 2024 DIRECT & IN-LIEU RECHARGE UTILIZING EXISTING CONVEYANCE

**7,250** <sup>AF</sup>

of intentional direct &  
In-lieu recharge within  
the Turlock Subbassin

**2.363** billion gal

of water put back on  
land in support of re-  
plenishing groundwater  
aquifers during the  
2024 Water Year



Listen to Wes Miller, Director of  
Water Operations, discuss TID's  
approach and plans for recharge  
projects, on TID's Water &  
Power Podcast.



TID understands the value of utilizing emerging technology and implementing innovative programs. A pioneering spirit enables TID to most efficiently use the resources entrusted to us.

## Project Nexus

Project Nexus is a concept that started in 2021 when a research team from the University of California outlined the benefits of solar-over-canals in an academic paper. The state of California committed \$20 million toward the project. TID was selected to pilot the program and identified two different sites on TID's canal system at which to implement the project. In 2024, TID installed the narrow span panels which are 20 feet wide and estimated to produce .5 MW of power. This proof of concept pilot project will give insight to the anticipated benefits of solar panels over canals, including water savings by limiting evaporation and the reduction of aquatic growth.

## Hydrological Water Tools

TID has developed innovative in-house modeling tools to manage and maximize the operations of the Tuolumne River Watershed. Utilizing data to populate the Hydrocomp Forecasting and Analysis Model (HFAM) and Lower System Analysis Model (LSAM) which tracks the overall state of the watershed, TID can make key decisions for efficient water practices. While 2024 was considered a normal water year, and followed the third wettest year on record, TID is always refining its hydrological water tools to maximize our

water resources to best provide for irrigation customers, environmental obligations and stewardship, planning for future needs, and the safety of our communities.

## Groundwater



Groundwater recharge is the process of replenishing groundwater aquifers with surface water from various sources such as storm water and rivers. In 2024 the TID Board of Directors approved the implementation of certain Groundwater Recharge Projects when water is available.

In January, the California Department of Water Resources (DWR) determined the Turlock Subbassin's Groundwater Sustainability Plan (submitted in 2023) was incomplete and provided comments for revision. The East Turlock Groundwater Sustainability Agency (GSA) and West Turlock GSA, of which TID is a member, had 180 days to revise and resubmit the GSP. While it was anticipated that DWR would complete their review of the revised GSP by the end of 2024, the year closed without a response from the state.



# VALUE OF RELIABILITY



The Value of Reliability comes from investing resources into the maintenance of our facilities to prepare for future load growth and electrification to of our communities.

## Substation Improvements

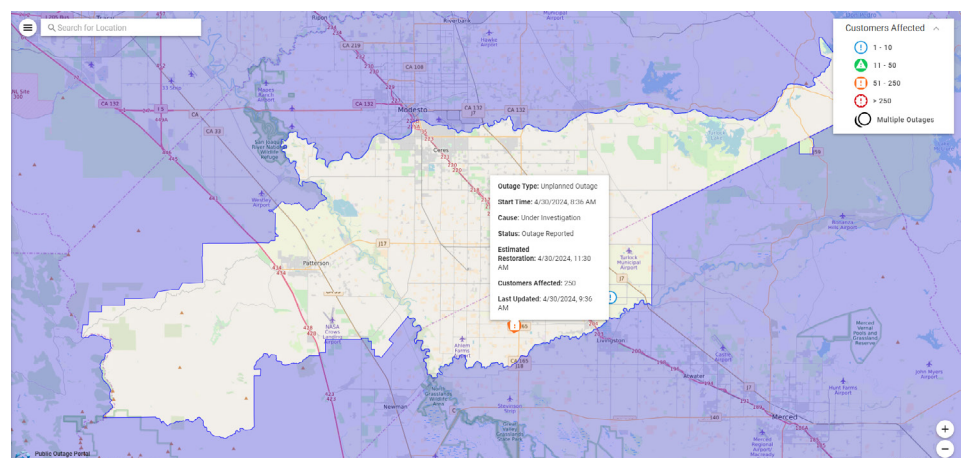


Planning for and executing critical enhancements and replacement of transformers that are nearing operational limits is essential to maintain reliability.

Modernization improvements include upgrading relay protection schemes which allow for maintenance activities to be conducted without taking a full station outage providing continuity of service and flexibility during needed equipment upkeep.

## Outage Management System

TID implemented a new Outage Management System (OMS) that will help monitor, detect, and manage power outages. The OMS supports TID's mission to provide reliable power and quality customer service. The new system will alert TID when outages occur and streamlining operations and provides public-facing improvements. One enhancement is the public outage portal, a map that allows customers to see details about an outage and provides real-time updates.








# VALUE OF


# INFRASTRUCTURE

 6,019 poles inspected

 164 poles replaced

 8,321 trees cut for vegetation management

 2.71 miles of conduit installed

 663 engineering and design projects completed



The Value of Infrastructure is demonstrated through the maintenance of our vital facilities that preserve the integrity of our system for future load growth and electrification in our communities.

## Don Pedro Life Extension Project Update



The Don Pedro Life Extension Project includes addressing aging infrastructure, increasing capacity and reliability.



The completed project will provide an increase of reliable carbon free energy, going from 203 MW to 263 MW, allowing for additional flexibility of dispatchable energy when the District needs it most.



Tune in to Episode 37 of the TID Water & Power Podcast to learn more about the Don Pedro Life Extension Project.

## PROJECT COMPONENTS COMPLETED

- | Diversion Tunnel Vent Pipe Slip Lining
- | Diversion Tunnel Slide Gate Replacement
- | Power Tunnel Fixed Wheel Gate Replacement
- | Power Tunnel Bulkhead Gate Replacement
- | Powerhouse Draft Tube Gate Replacements
- | 72" Flood Control Guard Valve Replacement
- | 108" Turbine Shutoff Valve #4 Installation
- | 72" Turbine Shutoff Valve #1-3 Replacement
- | Power Tunnel Coating
- | Powerhouse Service Air Compressor Replacement
- | Powerhouse Service & Fire Water System Replacements
- | Powerhouse Drainage System Improvements
- | Powerhouse Gantry Crane Refurbishment & Uprate
- | Low Voltage AC & DC System Improvements
- | Facility Lighting Replacement



# VALUE OF

# COMMUNITY-OWNED



The Value of Community-Owned is ever-present at TID, through our commitment to listening and then acting on the needs of those we serve.

## QUALITY CUSTOMER SERVICE

Every two years, TID conducts a Customer Satisfaction survey to gain a deeper understanding of residential and commercial customers' perceptions of TID. The 2024 survey assessed customers' awareness and understanding of services offered by TID and offered valuable information on customers' preferences regarding communication and interaction with the District.

**125,744**

customer calls answered  
by Customer Service  
Representatives

**878,518** payments

processed (all payment types)

**1,926** customers

enrolled in the Medical  
Assistance Program

**4,072** customers

enrolled in the CARES  
Payment Assistance Program

**\$269**

average annual CARES discount  
received per customer

**\$980,235**

LIHEAP dollars received by  
1,603 eligible customers

**\$501,387** provided

back to customers through  
Energy Efficiency Programs

**1,311** MWhs

Energy Efficiency Savings (Re-  
sidential & Non-Residential)

**1,026**

Residential Energy Efficiency  
Rebates issued

**461**

Electric Vehicle rebates  
issued (residential and  
commercial)

**244**

Electric Vehicle Charger  
rebates issued (residential  
and commercial)

**\$323,622**

total dollars provided back  
to customers through  
Electric Vehicle rebates

**10 level 2**

electric vehicle chargers  
installed by TID within  
TID's service territory



# HISTORICAL OPERATING

# STATISTICS

(\$ In thousands)

## AVERAGE CUSTOMERS AT END OF PERIOD:

|              | 2024          | 2023          | 2022          | 2021          | 2020           |
|--------------|---------------|---------------|---------------|---------------|----------------|
| Residential  | 76,383        | 75,883        | 75,459        | 75,238        | 74,376         |
| Commercial   | 7,559         | 7,531         | 7,493         | 7,469         | 7,386          |
| Industrial   | 971           | 952           | 914           | 883           | 876            |
| Other (1)    | 10,867        | 10,678        | 10,533        | 10,326        | 21,346         |
| <b>Total</b> | <b>95,780</b> | <b>95,044</b> | <b>94,399</b> | <b>93,916</b> | <b>103,984</b> |

## MWh SALES:

|                          |                  |                  |                  |                  |                  |
|--------------------------|------------------|------------------|------------------|------------------|------------------|
| Residential              | 829,921          | 786,419          | 812,271          | 826,440          | 821,010          |
| Commercial               | 139,603          | 135,912          | 141,083          | 141,141          | 134,617          |
| Industrial               | 902,516          | 858,725          | 855,969          | 843,108          | 808,223          |
| Other (1)                | 386,242          | 381,267          | 443,219          | 413,741          | 399,657          |
| <b>Total Retail</b>      | <b>2,258,282</b> | <b>2,162,323</b> | <b>2,252,542</b> | <b>2,224,430</b> | <b>2,163,507</b> |
| Interdepartmental meters | 51,794           | 53,706           | 53,557           | 50,595           | 49,925           |
| Wholesale Power          | 1,256,936        | 1,196,236        | 1,098,092        | 1,214,391        | 1,124,759        |
| <b>Total</b>             | <b>3,567,012</b> | <b>3,412,265</b> | <b>3,404,191</b> | <b>3,489,416</b> | <b>3,338,191</b> |

## SOURCES OF MWh:

|                       |                  |                  |                  |                  |                  |
|-----------------------|------------------|------------------|------------------|------------------|------------------|
| Generated by district | 2,604,849        | 2,666,127        | 2,309,324        | 2,171,463        | 2,182,107        |
| Purchased             | 1,033,937        | 808,005          | 1,169,589        | 1,404,758        | 1,244,994        |
| <b>Subtotal</b>       | <b>3,638,786</b> | <b>3,474,132</b> | <b>3,478,913</b> | <b>3,576,221</b> | <b>3,427,101</b> |
| System losses         | 71,774           | 61,867           | 74,722           | 86,805           | 88,909           |
| <b>Total</b>          | <b>3,567,012</b> | <b>3,412,265</b> | <b>3,404,191</b> | <b>3,489,416</b> | <b>3,338,192</b> |

## ELECTRIC ENERGY REVENUES (in thousands):

|   |                  |                  |                  |                  |                  |
|---|------------------|------------------|------------------|------------------|------------------|
| Residential                                   | 136,226          | \$134,223        | \$130,741        | \$132,132        | \$130,991        |
| Commercial                                    | 20,350           | 20,723           | 20,122           | 19,993           | 19,186           |
| Industrial                                    | 111,036          | 111,947          | 102,935          | 100,311          | 96,630           |
| Other (1)                                     | 54,651           | 56,249           | 59,767           | 55,868           | 54,167           |
| Power Supply Adjustment Recognized (Deferred) | 13,900           | 34,390           | 775              | (18,813)         | (25,935)         |
| Rate Stabilization Transfer                   | (16,051)         | (12,145)         | 27,757           | 0                | 0                |
| <b>Total Retail Energy</b>                    | <b>320,112</b>   | <b>345,387</b>   | <b>342,097</b>   | <b>289,491</b>   | <b>275,039</b>   |
| Electric Service Charges                      | 453              | 530              | 630              | 323              | 246              |
| Other Electric Revenue                        | 41               | 53               | 46               | 20               | 38               |
| <b>Electric Energy Retail</b>                 | <b>320,606</b>   | <b>345,970</b>   | <b>342,773</b>   | <b>289,834</b>   | <b>275,323</b>   |
| Wholesale Power                               | 59,121           | 90,925           | 120,579          | 78,830           | 47,052           |
| <b>Total</b>                                  | <b>\$379,727</b> | <b>\$436,895</b> | <b>\$463,352</b> | <b>\$368,664</b> | <b>\$322,375</b> |

## SYSTEM PEAK DEMAND (MW)

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 595 | 567 | 594 | 562 | 571 |
|-----|-----|-----|-----|-----|

## AVERAGE MWh SALES PER CUSTOMER

|             |         |         |         |         |         |
|-------------|---------|---------|---------|---------|---------|
| Residential | 10.865  | 10.364  | 10.764  | 10.984  | 11.039  |
| Commercial  | 18.469  | 18.047  | 18.829  | 18.897  | 18.226  |
| Industrial  | 929.471 | 902.022 | 936.509 | 954.822 | 922.629 |

## AVERAGE REVENUE PER MWh

|             |          |          |          |          |          |
|-------------|----------|----------|----------|----------|----------|
| Residential | \$164.14 | \$170.68 | \$160.96 | \$159.88 | \$159.55 |
| Commercial  | \$145.77 | \$152.47 | \$142.63 | \$141.65 | \$142.52 |
| Industrial  | \$123.03 | \$130.36 | \$120.26 | \$118.98 | \$119.56 |

## AVERAGE COST OF POWER

### PER KWh FOR RETAIL LOAD (2)

|         |         |         |         |         |
|---------|---------|---------|---------|---------|
| \$0.076 | \$0.085 | \$0.079 | \$0.068 | \$0.064 |
|---------|---------|---------|---------|---------|

(1) Includes agricultural and municipal water pumping and street lighting.

(2) Includes depletion and depreciation on generation assets, excludes debt service.



# HISTORICAL RESULTS OF OPERATIONS

(\$ in thousands)

## OPERATING REVENUES:

|                             | 2024           | 2023           | 2022           | 2021           | 2020           |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Electric energy - Retail    | \$320,606      | \$345,970      | \$342,773      | \$289,834      | \$275,323      |
| Electric energy - Wholesale | 59,121         | 90,925         | 120,579        | 78,830         | 47,052         |
| Wholesale Gas               | 2,311          | 3,423          | 8,888          | 5,237          | 2,005          |
| Irrigation                  | 15,182         | 14,224         | 14,711         | 15,138         | 13,213         |
| Other                       | 126            | 185            | 577            | 1,913          | 4,383          |
| Total Operating Revenue     | <b>397,346</b> | <b>454,727</b> | <b>487,528</b> | <b>390,952</b> | <b>341,976</b> |

## OPERATING EXPENSES:

|                               |                |                |                |                |                |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|
| Power Supply:                 |                |                |                |                |                |
| Purchased Power               | 54,366         | 82,190         | 107,226        | 80,532         | 58,027         |
| Generation and Fuel           | 136,158        | 153,638        | 150,159        | 105,616        | 83,200         |
| Total Power Supply            | 190,524        | 235,828        | 257,385        | 186,148        | 141,227        |
| Other Electric O&M            | 34,432         | 34,415         | 34,620         | 25,412         | 25,415         |
| Irrigation O&M                | 16,295         | 15,366         | 17,004         | 13,708         | 13,996         |
| Public Benefits               | 3,825          | 5,014          | 5,371          | 4,384          | 5,119          |
| Administration and General    | 33,278         | 32,214         | 36,485         | 29,340         | 27,431         |
| Depreciation and amortization | 67,628         | 64,227         | 67,687         | 69,159         | 65,276         |
| Total Operating Expenses      | <b>345,982</b> | <b>387,064</b> | <b>418,552</b> | <b>328,151</b> | <b>278,464</b> |

## OPERATING INCOME

|  |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
|  | <b>51,364</b> | <b>67,663</b> | <b>68,976</b> | <b>62,801</b> | <b>63,512</b> |
|--|---------------|---------------|---------------|---------------|---------------|

## OTHER INCOME (EXPENSE):

|                                |        |        |        |        |        |
|--------------------------------|--------|--------|--------|--------|--------|
| Interest/Derivative (loss)gain | 9,755  | 7,082  | 2,112  | 3,078  | 7,243  |
| Miscellaneous                  | 38,665 | 16,399 | 15,756 | 11,978 | 10,407 |
| Total Other Income             | 48,420 | 23,481 | 17,868 | 15,056 | 17,650 |

## INTEREST EXPENSE

|                |        |        |        |        |        |
|----------------|--------|--------|--------|--------|--------|
| Long Term Debt | 31,823 | 34,081 | 35,604 | 36,831 | 44,544 |
|----------------|--------|--------|--------|--------|--------|

## TRANSFER (TO) FROM DEFERRED REGULATORY CREDITS

|  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | - | - | - | - | - |
|--|---|---|---|---|---|

## LOSS ON ABANDONMENT OF CLAVEY RIVER PROJECT

|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| NET INCOME (LOSS) | 67,961 | 57,063 | 51,240 | 41,026 | 36,618 |
|-------------------|--------|--------|--------|--------|--------|

## NET POSITION:

|                   |           |           |           |           |           |
|-------------------|-----------|-----------|-----------|-----------|-----------|
| Beginning of Year | 601,085   | 544,022   | 492,782   | 451,756   | 415,138   |
| End of Year       | \$669,046 | \$601,085 | \$544,022 | \$492,782 | \$451,756 |

## DEBT SERVICE COVERAGE—REVENUE BONDS/COP'S

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 4.34x | 3.00x | 2.47x | 4.22x | 3.76x |
|--|-------|-------|-------|-------|-------|



# VALUE OF **TID**



TID Customer Academy at Don Pedro Dam



4th of July Parade Float



TID Line Department at Hughson High School Career Fair



Guniting crew performing winter maintenance on the canals



Project Nexus narrow span construction



Tuolumne River Restoration



TID subject matter expert presenting at the Association of California Water Agencies conference



TID and Safe Kids Stanislaus partner to provide water safety education and life jackets to youth in the community



TID Technical Skills Series graduates



Team TID Blood Drive



TID groundwater recharge demonstration



# VALUE OF **TID**

The Value of TID is demonstrated through the daily commitment to our mission, vision, and core values.



## TID Mission

TID will provide reliable and competitively priced water and electric service, while being good stewards of our resources and providing a high level of customer satisfaction.

## Vision

TID's reputation will be as a trusted partner, innovative leader, and model of sustainability in enhancing the quality of life for our community, through embracing our core values at every level of our organization.

## Core Values

**Reliability** TID plans, builds and maintains its water and electric systems to reliably serve its customers.

**Affordability** TID provides stable, competitive rates for its customers.

**Stewardship** TID provides leadership by sustainably managing the resources entrusted to us.

**Safety** TID ensures a safe environment for employees and customers.

**Quality Workforce** TID attracts and retains highly-skilled and experienced team members.

**Customer Focus** TID is committed to building strong and lasting relationships with our customers and community through engagement, transparency, accountability and trust.

**Local Control** Decisions made by local people to address local needs are essential to TID's continued success.

**Visionary** TID proactively balances near-term decision making with the long-term well-being of its customers.

## TID Overview

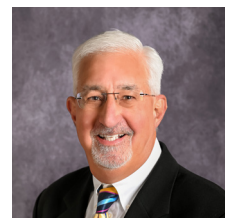
Established in 1887, the Turlock Irrigation District (TID) was the first irrigation district in the state. Today it is one of only four irrigation districts in California that also provides electric retail energy directly to homes, farms and businesses. Organized under the Wright Act, the District operates under the provisions of the California Water Code as a special district. TID delivers irrigation water through 250 miles of a gravity-fed canal system that irrigates approximately 150,000 acres of farmland.

In addition, TID owns and operates an integrated and diverse electric generation, transmission and distribution system that serves a population of approximately 240,000 within a 662 square-mile area. TID is one of eight Balancing Authorities in California and operates independently within the Western United States power grid. A Balancing Authority must ensure customers' usage and resources are matched on a moment-by-moment basis. TID is governed by a five-member, locally elected Board of Directors.

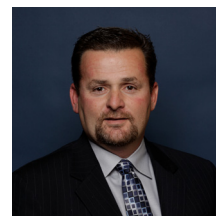
## TID Board Members



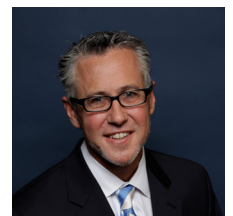
**Michael Frantz**  
*Division 1*



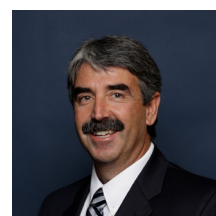
**David Yonan,**  
**Vice President**  
*Division 2*



**Joe Alamo**  
*Division 3*



**Rob Santos, Secretary**  
*Division 4*



**Ron Macedo, President**  
*Division 5*





**WATER & POWER**  
*Serving Central California since 1887*



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