TO: BOARD OF DIRECTORS

FROM: MICHAEL LEBRUN MSL
INTERIM GENERAL MANAGER

DATE: APRIL 8, 2011

AGENDA ITEM F
APRIL 13, 2011

GENERAL MANAGER'S REPORT

ITEM

Standing report to your Honorable Board -- *Period covered by this report is March 19, 2011 through April 8, 2011.*

DISTRICT BUSINESS

Administrative

- Advertising for one of three vacant operations positions, closes April 15.
- 2011/2012 Budget development. Board Workshop is scheduled for May 18.
- 2010 DWR Form 38, District Water System Statistics (Attached)
- Industry News of Interest (Attached)
    - Smart Grids
    - City of Redding considers outsourcing.
    - Water Agency Solar Project
-

Operations

- Sludge pumping completed at Southland Facility on April 6
- Via Concha well remains inoperable

Meetings

Meetings attended:

- March 21, NMMA Technical Group
- March 22, City of Santa Maria UWMP Update
- March 23, Regular Board Meeting
- March 25, District Counsel Coordination
- March 25, Special District General Managers
- March 28, phone conference with Outreach
- March 29, phone conference with Rate Consultant
- March 29, phone conference with Bond team
- March 30, sludge dewatering demonstration
- March 30, meeting with Consultant to discuss via Concha Well
- March 31, monthly Operations/Capital Improvement update
- April 1, phone conference with Outreach
- April 4, coordination with Board President
- April 4, phone conference with Outreach
- April 4, phone conference with Rate Consultant
- April 6, with developer of Track 2634

Meetings Scheduled:

- April 8, NMMA Technical Group
- April 12, Southland Upgrade Operator Workshop
- April 12, phone conference with Via Concha Well contractor

- April 13, Regular Board Meeting
- April 14, Finance and Audit Committee
- April 15, District Counsel Coordination

Safety Program

- No accidents or injuries.

RECOMMENDATION

Staff seeks direction and input from your Honorable Board.

ATTACHMENTS

- DWR Form 38
- Smart Grids Article
- City of Redding Article
- Energy Article

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State of California | Department of Water Resources | The Resources Agency

PUBLIC WATER SYSTEM STATISTICS

Calendar Year 2010

NIPOMO COMMUNITY SERVICES DISTRICT P.O. BOX 326, NIPOMO, CA 93444-0326

1. General Information

Please follow the provided instructions.

Contact : Michael LeBrun
Title: Interim General Manager
Phone: 805-929-1133
Fax: 805-929-1932
E-mail: gm@ncsd.ca.gov
Website: ncsd.ca.gov
County: **San Luis Obispo**
Population served: **10,867**
Names of communities served: Nipomo

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	3493			
Multi-family Residential	473			
Commercial/Institutional	95			
Industrial	0			
Landscape Irrigation	91			
Other	0			
Agricultural Irrigation	2			
TOTAL	4154			

3. Total Water Into the System - Units of production:

☑ acre-feet ☐ million gallons ☐ hundred cubic feet

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Potable	*Wells*	124.88	82.97	153.62	168.81	250.87	286.22	285.12	286.66	274.62	191.56	147.18	114.03	2366.54
	Surface													
	Purchased 1/													
	Total Potable	124.88	82.97	153.62	168.81	250.87	286.22	285.12	286.66	274.62	191.56	147.18	114.03	2366.54
Untreated Water														
Recycled 2/														

1/ Potable wholesale supplier(s): _____

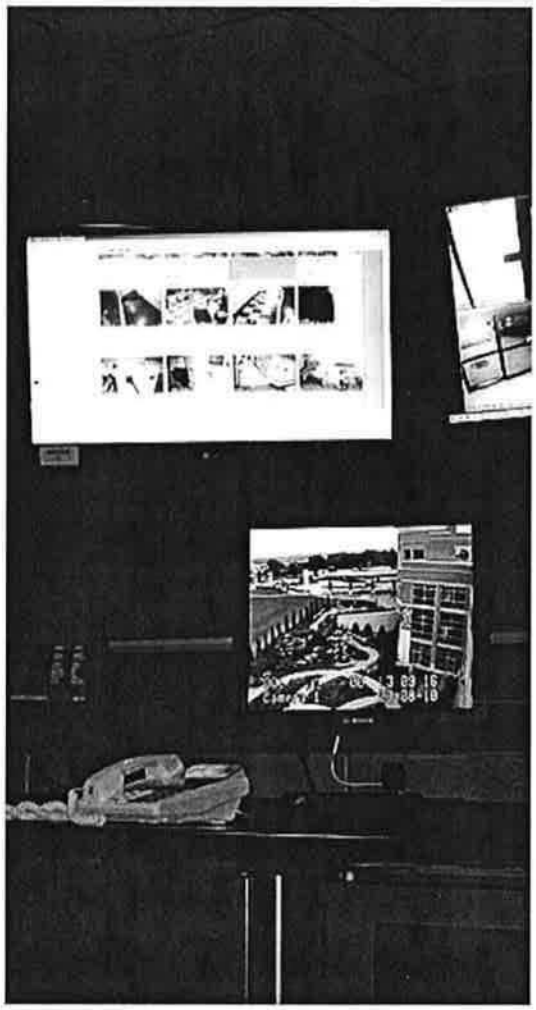
2/ Recycled wholesale supplier(s): _____
Level of treatment: _____

4. Metered Water Deliveries - Units of delivery:

☑ acre-feet ☐ million gallons ☐ hundred cubic feet

If recycled is included, ✓box ↓	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A.SingleFamilyResidential ☐	167.33	60.96	97.97	55.88	149.54	93.51	271.98	139.08	316.91	114.89	197.79	89.59	1755.43
B.Multi-family Residential ☐	12.97	7.28	12.54	8.51	13.98	10.22	14.97	12.15	17.33	10.76	13.23	9.97	143.91
C.Commercial/Institutional ☐	8.19	4.61	6.18	4.8	7.3	8.18	8.12	7.71	9.99	10.46	7.99	6.66	90.19
D.Industrial ☐	0	0	0	0	0	0	0	0	0	0	0	0	0
E.Landscape Irrigation ☐	22.95	3.64	8.03	3.8	22.1	25.34	37.95	33.68	46.53	30.48	29.48	14.31	278.29
F.Other ☐	0.19	0.04	0.14	0.23	0.18	0.32	0.01	0.58	4.35	4.57	0.2	0.35	11.16
Total Urban Retail (A thru F)	211.63	76.53	124.86	73.22	193.1	137.57	333.03	193.2	395.11	171.16	248.69	120.88	2278.98
Agricultural Irrigation ☐	1.22	0.03	1.25	0.03	2.26	0.15	3.43	0.19	3.27	0.26	1.85	0.06	14
Wholesale(*to other agencies*) ☐													

Smart Grids: Smart Meters Are Getting Smarter



The smart grid concept goes beyond metering technology and better system control. Its power lies in the communication network that creates opportunities for delivering new services, attracting business, and promoting sustainable solutions. **BY ARIF A. QURAISHI AND DENNIS SIEGERT**

THE TERM "SMART GRID" originated with the electric utility industry and refers to a system in which intelligent controls and automation tie the power grid together in an automated network that makes electricity delivery more secure, reliable, economical, efficient, and environmentally friendly. Essential to the concept is the enabling of active consumer participation, so power users can engage electricity markets and respond to supply and demand signals—for their own advantage and to the benefit of the larger system.

In a municipal utility context, the smart grid concept easily extends to water, electricity, and gas. It enables two-way digital communication between a utility and its customers, helping the utility operate its systems more efficiently, curtail waste, and hold down prices. Meanwhile, it helps customers visualize their own use of resources and make informed choices on how much to use, when to use it, and at what cost.

To appreciate a smart grid, it's important to understand the concept as more than smart-metering technology, with which it is often confused. In fact, thinking of a smart grid merely as smart meters is like thinking of the Internet solely as a place for document searches and e-mail. The greatest value of smart grid technology may be the wired or wireless network on which it functions. That network can serve other community purposes, limited only by imagination. A few examples include

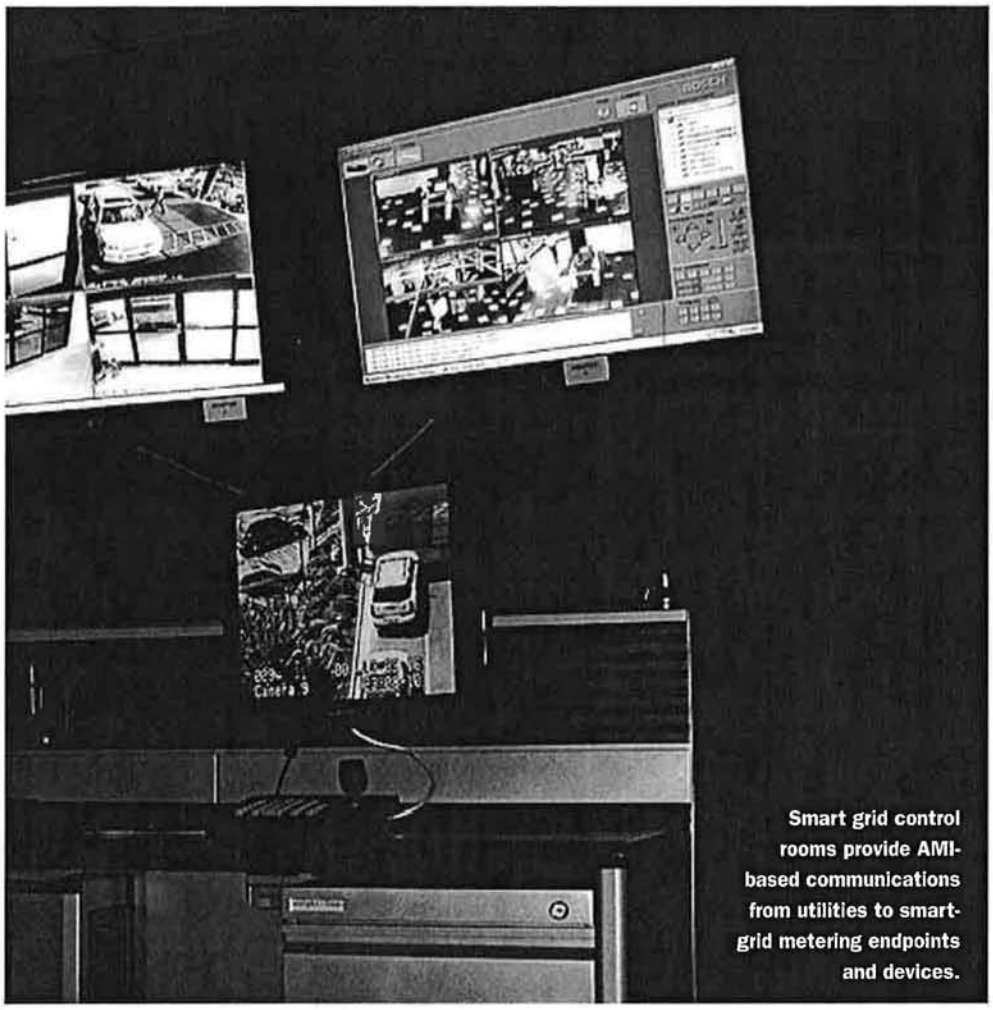
- efficiency-boosting communication to utility service personnel and among city departments.
- monitoring and control for diverse functions, such as facility security, lighting, and parking enforcement.
- a method by which a utility can communicate with and educate residents and residents can communicate with each other and the world.
- a platform on which to collect and analyze information for improved planning, pricing, and customer support.

All that, combined with user-fee and tax savings, appeals to homeowners and businesses that are considering where to locate or expand. Simply stated, progressive residents may prefer a city with an infrastructure that looks less like a traditional desktop PC and more like a tablet computer.

HOW A SMART GRID WORKS

To understand how a smart grid works, it helps to start with an analogy to smart buildings. Building systems that control comfort, energy use, security, safety, and other functions communicate with each other on one network, and the building communicates with the outside world.

Software then lets building systems automatically optimize performance and costs, reacting to signals such as changes in the weather or increases forecast in electricity prices. In addition, the system translates performance data into easy-to-read displays (dashboards) so managers



Smart grid control rooms provide AMI-based communications from utilities to smart-grid metering endpoints and devices.

PHOTOGRAPH: JOHNSON CONTROLS

Arif A. Quraishi, local government energy solutions director, and Dennis Siegert, municipal utility solutions manager, are with Johnson Controls (www.johnsoncontrols.com), Milwaukee.

can view opportunities for operational changes that reduce costs and increase efficiency.

From individual buildings, it's easy to extend the smart buildings concept to an entire campus and then to a smart grid system that serves an entire city. However, when a municipal utility interacts with multiple diverse, independent users, the dynamics are different.

SMART GRID COMPONENTS

The smart grid is a major departure from the traditional structure of water, gas, and electric utilities as separate collections of pipes and wires that need intensive physical inspection and, at best, provide one-way communication via meters.

Supervisory control and data acquisition (SCADA) technology enables remote monitoring of field facilities, such as electric substations and water towers, reservoirs and pump stations, but the communication typically stops well short of an end user. In other words, customer interface begins and ends with meters.

Enter smart metering. The concept began with automated meter reading (AMR), in which meters transmit usage data to a mobile or fixed-base system, saving the cost of manual reading. Advanced metering infrastructure (AMI) goes further, allowing utilities to collect more information, engage in two-way communication with customers, and even control certain customer-level functions more promptly.

In the broadest sense, AMR/AMI helps communities cut costs and save money to invest in larger initiatives that attract business, promote job growth, and improve quality of life. Utility-specific benefits include improved billing accuracy and timeliness, better cash flow, limiting of tampering and theft, and faster leak detection, which can prevent property damage and stretch system capacity.

But it's the communication network on which AMR/AMI operates that turns smart metering into a smart grid that can provide other capabilities, including

- Providing in-home displays that show customer usage in real time. Homeowners can use the display to make wise usage choices or conserve resources. A utility can use the display to send information about water advisories or special usage limits.
- Providing broadband Internet connectivity to homes, schools, and businesses.
- Using acoustic devices on customer meters to "listen" for small leaks, which can be mapped and assigned priorities for repair.
- Monitoring a home's power or water usage at intervals—as short as 15 min—to collect near-real-time data on demand patterns to aid operations and system planning.
- Enabling remote shutoff of air conditioners for load-control programs or service disconnections for nonpayment (where allowed).
- Managing traffic-related functions from streetlights to parking meters.
- Regulating lawn irrigation and supporting enforcement of special water conservation rules.

INVESTMENT

Smart grid technologies require investments that may seem daunting in hard economic times. However, progressive utilities have found a financing tool called performance contracting that makes it possible to complete substantial improvements with no up-front investment and without a need for rate or tax increases.

Under a performance contract, an energy service company (ESCO) performs a set of projects that reduce operating and energy costs by a defined amount over a contract term of 10–15 years. The city then pays for the cost of improvements over a specified period of time from resulting savings. If savings in a given year fall short of the contract amount, the ESCO pays the difference to the city. Usually, financing is structured so monthly savings are greater than the monthly payment on the improvements. Thus, the city sees immediate positive cash flow. At the end of the contract when the improvements are fully paid for, the city reaps the

The smart grid concept and the technologies that enable it can make municipal utility operations more efficient.

Smart water meters provide users with daily consumption data to help them reduce their water footprint.

full benefit of the savings on an ongoing basis.

Investments in AMR/AMI and smart grid technology typically have attractive payback periods, making them well suited for performance contracting. For even greater benefit, the projects can be bundled with other high-return solutions, such as lighting retrofits, control automation, and facility upgrades. Improvement packages can also include long-payback projects that might not otherwise be financially justified on their own.

IMMEDIATE BENEFITS

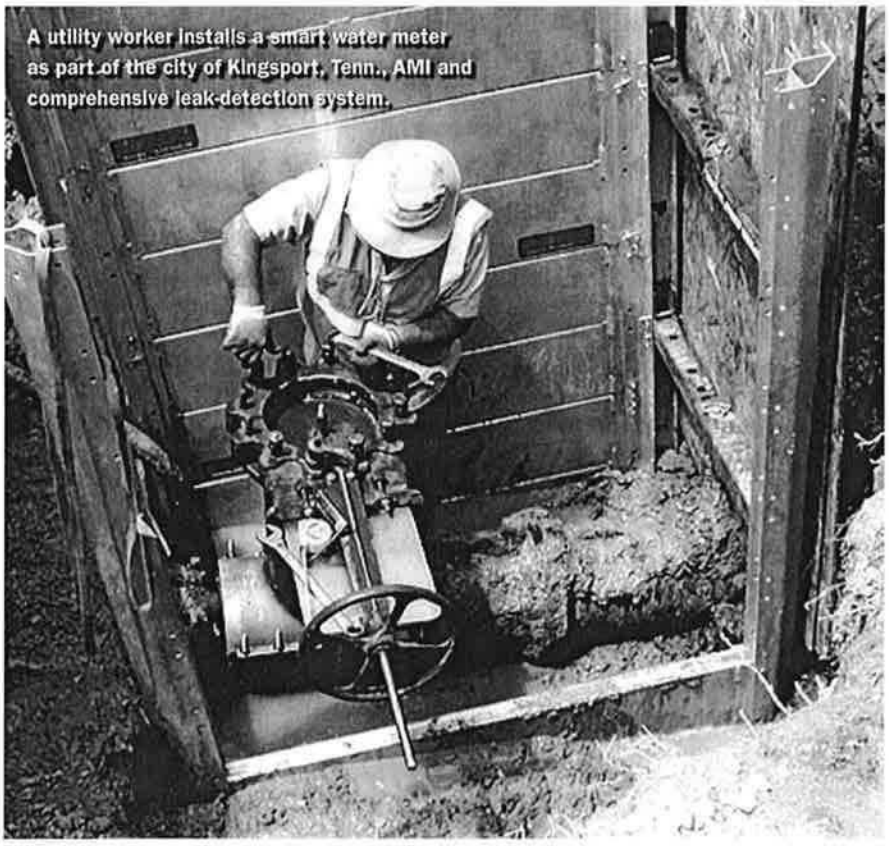
The city of Cuyahoga Falls, Ohio, provides lessons in the immediate benefits of initiating a smart grid concept and its potential. The city replaced 42,000 meters—18,000 water meters and 24,000 electric meters—and installed a robust wireless AMR/AMI infrastructure. Immediate benefits included reduced meter-reading and billing labor, elimination of unpopular estimated meter readings, increased billing accuracy, and improved cash flow.

The electric meters have two-way communication capabilities that can support demand response programs for commercial and industrial customers. The $1.7 million package, which includes investments in building efficiency, comes with annual savings of $2 million for 10 years.

Looking ahead, the city hopes to expand the electric meters' two-way communication capabilities. By charting commercial and industrial customers' demand and consumption data, the city could help those customers reduce demand and shift consumption to lower-priced off-peak times. Doing so would save customers money and help the city reduce the amount of power it must buy.

In addition, the city could create a Web-based dashboard on which all customers could see their real-time demand and consumption and use the data to modify their behavior. In the longer term, the metering technology could help the city automate demand response for residents who so desire.

Meanwhile, the metering system helps the city pinpoint the extent of power outages and respond and restore service faster, shut off meters remotely in case of nonpayment, and get instant meter reads for residents who are ending service. On the water side, the system detects anomalies that may indicate leaks, so city staff can better manage city resources.



A utility worker installs a smart water meter as part of the city of Kingsport, Tenn., AMI and comprehensive leak-detection system.

THE NEXT STEP

The smart grid concept and the technologies that enable it can make municipal utility operations more efficient, keep costs competitive, improve service to customers, and help revitalize cities, as well as support sustainability's triple bottom line—economic prosperity, environmental protection, and social benefit.

PHOTOGRAPHS: SAMUEL MCCLELLAN, HTTP://SAMMCCLELLAN.OCLUX (TOP); JOHNSON CONTROLS (BOTTOM)

Redding to push ahead with outsourcing

- By Scott Mobley
- Posted April 5, 2011 at 10:27 p.m.

Private firms may one day operate the city's sewer and water treatment plants, manage its information technology and run its building and planning departments.

The City Council voted 3-2 on Tuesday to hire a consultant to study treatment plant outsourcing and seek proposals from firms managing information technology and planning.

Mayor Missy McArthur voted for seeking the outsourcing proposals along with council members Rick Bosetti and Patrick Jones.

"We've got costs that are going to be escalating for the next four years," said Bosetti, who brought the outsourcing proposal forward at a council priority-setting workshop last month. "We can't take the city and run it negative $2.5 million."

McArthur said she feels a fiduciary duty to taxpayers to at least look at outsourcing options. The studies may show outsourcing won't save money, she said. Jones tried to use outsourcing as a lever to force concessions on pensions and health insurance from workers.

"If the various unions would agree to concessions would we not need privatization," Jones said, noting he was reluctant to send jobs outside town.

Jones tried to convince Bosetti to make outsourcing contingent on concessions from the unions. Bosetti refused, saying he never intended privatization to be a negotiating tool.

Vice Mayor Dick Dickerson and council member Francie Sullivan opposed moving ahead with outsourcing. "I just can't support the idea of laying off 60 people here so 60 people can be hired in Minneapolis and all the problems that will cause," Dickerson said to loud applause from the many city employees and their supporters in the council chamber. "We need to find a way to reduce these costs without contributing to the unemployment of Redding and Shasta County."

The city could stipulate in its contracts with private firms that current employees get a first shot at the private sector jobs, City Attorney Rick Duvernay told the council.

Hiring consultants to study privatizing treatment plants, information technology, planning and building could cost the city general fund and utility funds around $150,000, said Barry Tippin, assistant city manager. The general fund will face a shortfall of up to $3 million this year, as pension and health insurance costs continue rising while tax revenues remain flat.

The council voted after listening to over a dozen people speak out against outsourcing city jobs, especially the Redding Electric Utility customer service center. Tippin had suggested the city

could save up to $300,000 annually by hiring a large call center firm to handle the account, such as one based in Minnesota.

Misty Rhoads, who lost her job as a Redding Police Department community service officer, was hired as an REU customer service representative.

"My paycheck is reinvested in the community," Rhoads said. "People in Minnesota will not be eating at Racha Noodle and Kapai Sushi.

Other speakers said out-of-town workers will not have the same knowledge, community ties and investment in the city as the workers living here and using the same services.

Bosetti agreed the REU customer service center provides excellent local service and proposed the city remove it from the outsourcing list.

He also suggested taking out traffic signal maintenance, since the city dedicates only one full time and another employee part time to routinely checking Redding's 85 signals.

Bosetti asked the city to consider information technology, planning, building and engineering for privatization.

Most cities keep information technology in house since the computers contain confidential information, Tippin said.

Privatization is not new to Redding. RABA — of which Redding is a majority member — has used a private contractor to run its bus service since 1981. The city outsourced its museums to Turtle Bay in 1996. Redding built a sports park to the standards of Big League Dreams, a private contractor, and tapped the firm to manage and promote it. The city and county in 2006 hired LSSI to run the library system. And last year, the city inked a contract with the Shasta Cascade Wonderland Association to handle its tourism promotion.

A steadily shrinking general fund has forced the city to consider privatizing other services. The council spent six months with 10 community members in 2009 evaluating city services for potential privatization before settling on basic parks maintenance as a lone candidate. The Community Services Department will seek bids from private firms for cutting grass, trimming shrubs and picking up litter a group of 30 city parks.

Cities around the world have outsourced services over the past 30 years. But at least as many cities have brought services back in house as have sent them out to the private sector over the past decade, according to a Cornell University study. Problems with quality and lack of savings are the main reasons cities cite for bringing services back, or "insourcing," according to the study.

ENERGY: Water agency begins solar project

SAN MARCOS ---- Water rates keep going up, but one part of the local cost will drop a bit ---- electricity.

The San Diego County Water Authority has signed a 20-year contract to buy sun-generated electricity, an agreement it says will save $1.7 million over the life of the contract.

Under the contract with Borrego Solar Systems Inc., three systems are being installed at Water Authority buildings. They are the Twin Oaks Valley Water Treatment Plant north of San Marcos, the Fred A. Heilbron Operations Center in Escondido and the Water Authority's headquarters in Kearny Mesa.

The Twin Oaks installation began March 14, and connections to the electrical grid are tentatively scheduled to begin April 28, Stewart said.

"We will actually start producing power for the grid at the beginning of May," Stewart said.

Permits are still being obtained for construction at the other two authority sites, she said. Construction should begin in a week or two in Escondido and is expected to be complete by early July.

The Water Authority pays nothing for the photovoltaic systems, which are Borrego Solar's responsibility, said Cheryll Stewart, the authority's special projects manager. The authority's responsibility is to buy the electricity under the power purchase agreement.

A total of 8,000 solar panels from Yingli Green Energy Americas Inc. are being installed, Stewart said. About 5,000 will be put in at Twin Oaks, 2,000 at the Kearny Mesa headquarters and 1,000 at the Escondido operations center.

Panel racks at the Twin Oaks site are black to address neighbors' concerns about potential glare, she said.

Combined, the systems are projected to make 2.8 million kilowatt-hours a year, enough for 30,000 homes. A kilowatt-hour measures how much electricity is used or produced over time. An appliance that uses 1,000 watts (1 kilowatt) of electricity in an hour, for example, uses 1 kilowatt-hour of energy.

The system at the treatment plant is estimated to produce about 1.73 million kilowatt-hours a year, Stewart said. The Kearny Mesa site will produce about 728,000 kilowatt-hours, and the Escondido location will provide about 300,000 kilowatt-hours.

Stewart said the projected $1.7 million savings over the contract's life is a conservative estimate and could be higher.

Borrego Solar estimates the systems will meet 60 percent of the power needs for the Kearny Mesa and Escondido sites, and more than 20 percent of the electricity required for the treatment plant north of San Marcos.

Stewart said the project brought an unexpected bonus: All of the contractors and subcontractors that Borrego used are from San Diego County. This was Borrego Solar's doing, not the Water Authority's, she said.

"They own the project," Stewart said of Borrego Solar. "They're responsible for the design, the construction, everything. They select the contractors. We don't get involved in that process. But it was nice to hear that they worked with local contractors."

The Water Authority was joined by two other water agencies, who also signed 20-year contracts with Borrego Solar: Helix Water District in East San Diego County and Vista Irrigation District. By bidding together, the agencies were able to negotiate better terms, she said.

Both of those other projects are complete. The Vista Irrigation project, completed in February, is estimated to produce 410,000 kilowatt-hours a year, about 60 percent of the headquarters' electrical needs. Savings are estimated to be $300,000.

OPTIONAL TRIM

The Helix system, activated on March 30, is estimated to produce 454,000 kilowatt-hours a year at its operations center, about 90 percent of the power used by the building.

Electricity savings are estimated to be about $30,000 over the life of the contract, not including the value of a $400,000 shade structure that was built as part of the project, said spokeswoman Kate Breece.

"It is for our yard to store our materials, valves and pipes, things that would deteriorate in the sun," Breece said. "We did not have to build that, they (Borrego) built it as part of the project."

Call staff writer Bradley J. Fikes at 760-739-6641.