



# ABAG POWER

**AN ASSOCIATION OF BAY AREA GOVERNMENTS  
SERVICE PROGRAM**





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Pictured: District Heating - an underground system for distributing heat generated in a centralized location. The heat is often obtained from a cogeneration plant burning fossil fuels but increasingly also biomass.



# MESSAGE FROM THE PRESIDENT



**"In California, roughly 40 percent of natural gas is used to generate electricity. As the state's electric utilities continue to convert electricity generation portfolios away from carbon-intensive resources, the way natural gas is used will change."**

**-California Energy Commission**

**Natural Gas Act Report: Strategies to Maximize the Benefits  
Obtained from Natural Gas as an Energy Source**

**November 2015**

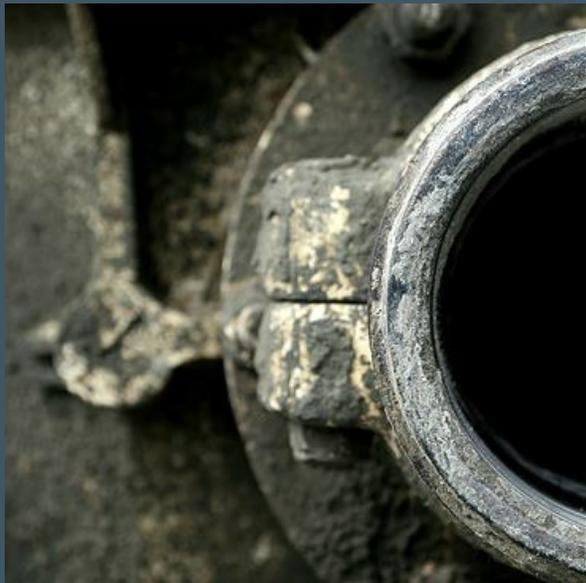
Since its formation in 1998, ABAG POWER has played a critical role in serving the energy needs of local governments and public agencies. As the years have passed, much has changed regarding the generation and consumption methods for both natural gas and electricity. California is at the forefront of reducing harmful environmental impacts, while simultaneously demonstrating the ability to solve complex and captivating issues - issues that directly impact our day-to-day lives.

ABAG POWER achieves tangible results through price savings and cost stability. Additionally, the program provides an array of intangible resources by convening multiple agencies within the region. Together with the Association of Bay Area Governments (ABAG), we are working to expand our sustainability and energy management services to local jurisdictions

through the implementation of energy efficiency, renewable energy, and general sustainability programs. These efforts have produced powerful and effective results, evident in the creation of the Bay Area Regional Energy Network (BayREN), ABAG's Resilience Program, multiple Energy Watch partnerships, installation of electric vehicle charging infrastructure, and more. We look forward to continuing these efforts as well as designing and implementing new programs to help reach our region's energy and sustainability goals.

**Ezra Rapport  
President  
ABAG POWER**

**Julie Bueren  
Board Chair  
ABAG POWER**



# CURRENT MEMBERSHIP

## CITIES

City of Alameda\*  
City of Albany\*  
City of Antioch  
City of Arcata  
City of Belmont  
City of Benicia\*  
City of Berkeley  
City of Cloverdale  
City of Cotati  
City of Cupertino\*  
City of Daly City  
City of Davis  
City of El Cerrito  
City of Foster City  
City of Fremont\*  
City of Gonzales\*  
City of Half Moon Bay\*  
City of Hercules\*  
City of Hillsborough  
City of Los Altos\*  
City of Menlo Park  
City of Mill Valley\*  
City of Millbrae\*  
City of Milpitas\*

City of Monte Sereno\*  
City of Newark  
City of Oakland\*  
City of Orinda\*  
City of Pacifica\*  
City of Patterson  
City of Petaluma\*  
City of Pinole  
City of Pleasanton\*  
City of Richmond\*  
City of Salinas\*  
City of San Carlos\*  
City of San Leandro  
City of San Mateo  
City of San Pablo  
City of San Rafael\*  
City of Santa Rosa\*  
City of Saratoga\*  
City of Sebastopol  
City of Union City\*  
City of Vallejo\*  
City of Watsonville\*  
City of Winters\*

## TOWNS

Town of Atherton\*  
Town of Los Altos Hills  
Town of Moraga\*  
Town of Windsor

## COUNTIES

County of Butte  
County of Contra Costa\*  
County of Monterey  
County of Napa\*  
County of San Mateo\*  
County of Santa Clara\*  
County of Sonoma

## SPECIAL DISTRICTS & OTHER AGENCIES

Golden Gate Bridge, Highway & Transportation District\*  
Hayward Area Recreation District  
Housing Authority of the City of Alameda\*  
Housing Authority of the County of Alameda  
Regional Administrative Facility Corporation\*  
South County Fire Authority  
Vallejo Sanitation & Flood Control District\*  
West County Wastewater District

**JPA**  
**MEMBERSHIP**  
**66 MEMBERS**  
**\*38 GAS POOL PARTICIPANTS**

# PROGRAM HISTORY



In 1996, when California's gas market was deregulated, ABAG formed a natural gas purchasing pool for local governments. Also in 1996, AB 1890 was enacted, initiating a process for deregulating the electrical industry. For the first time, California's consumers had an abundance of options for electricity procurement. With a "gold rush" mentality, hundreds of Energy Service Providers registered to do business, creating both confusion and opportunity in the marketplace. Shortly thereafter, ABAG POWER, a Joint Powers Authority (JPA), was formed in collaboration with many Bay Area cities, counties, and special districts. In a time of rapidly evolving energy markets, the objective of the JPA was to provide leadership for local governments in the areas of energy procurement and energy management.

"ABAG POWER will acquire for use by its Members, energy, including but not limited to, natural gas and electricity, and of telecommunications services, and such other services and goods as may be necessary or convenient to optimize costs savings and to manage the use or the supply of energy or telecommunications"

(Joint Powers Agreement § 4)

After three years of operation, the electric aggregation program was stunted by California's energy crisis. Due largely to extreme price volatility caused by market manipulation, ABAG POWER suspended the electric program and returned all electric accounts to PG&E service. The natural gas pool was also affected by the crisis, but to a lesser degree and was therefore able to ride through this stormy period.

After twenty years of operation, the natural gas program remains active, serving nearly forty member agencies throughout PG&E's service territory.

# CORE COMPETENCIES

## What is a Core Transport Agent? What are some of the significant operational differences between ABAG POWER and an investor-owned utility?

A Core Transport Agent (CTA) is a natural gas supplier that purchases and delivers gas to PG&E's pipeline network on behalf of its customers. The term "core" refers to residential and small commercial end-users that account for the majority of all load. **As a CTA, ABAG POWER is responsible for natural gas procurement and scheduling** on behalf of the participating agencies. POWER is a publicly owned program that operates like a cooperative, and like PG&E and other CTAs, POWER follows rules and regulations approved by the California Public Utilities Commission (CPUC).

ABAG POWER's natural gas program is available to public agencies within PG&E's Northern California service territory. The program implements a natural gas purchasing strategy that seeks to balance and fulfill dual goals of **price stability** and **cost savings**. Historically, this has been accomplished through a blend of short-term, index-based and long-term, fixed-price gas purchase contracts from various suppliers. By aggregating the gas needs of our members, our regional procurement model results in competitive pricing.

Natural gas is a worldwide commodity with considerable price volatility and relatively inelastic demand. The volatility of the market has been demonstrated multiple times in the past 15 years by defining events such as the energy crisis of 2001, Hurricane Katrina in 2005, the peak of the oil crisis in 2008, and the recent frigid winters on the East Coast.

Instances like these cement the need for public agencies to hedge operational necessities such as energy. POWER members have consistently agreed that maintaining price stability is an important goal for their jurisdiction, even at the expense of cost savings. For this reason, POWER offers both a unique leveled billing structure and a purchasing strategy that offers monthly and yearly rates that are more stable than those of PG&E.

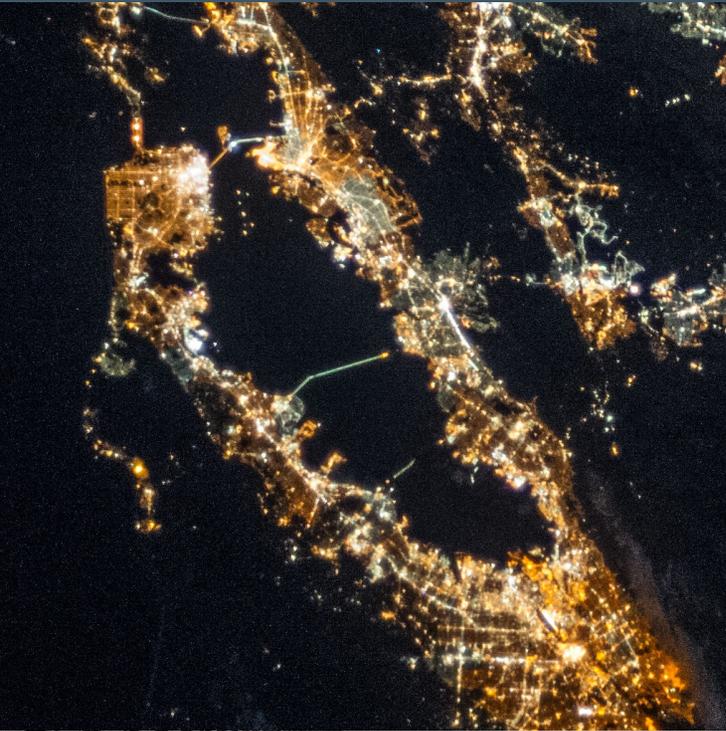
ABAG POWER provides members a consolidated bill that includes both POWER and PG&E charges, presenting a simple overview of individual account information broken down by provider, thereby eliminating the confusion created by receiving two bills.

Operating a smaller, focused program also allows us to deliver more personalized and responsive customer service; we also are able to carefully validate each individual account's incoming utility bill to ensure the data is accurate.

Although many of POWER's member accounts are smaller core service facilities, the program also supplies larger "non-core" accounts not serviced by PG&E that on average consume more than 20,800 therms per month. Non-core accounts receive discounted transportation and distribution rates.



# A SHIFTING LANDSCAPE



With an increased focus on sustainability and social responsibility, communities across the country are looking for innovative methods to empower and engage their citizens.

Community Choice Aggregation is a new tool for local agencies and constituents to become more active and have a greater impact in climate action efforts, as well as more control over the purchase of their electricity.

The culture and expectations of the energy industry have changed tremendously in recent years due to ambitious ongoing commitments to generate low-emission electricity. Traditional electricity generation resources like coal and nuclear fission have been largely supplanted by cleaner-burning natural gas and renewable generation sources.

Significant advances towards these commitments have come due to policy initiatives such as the **Renewables Portfolio Standard (RPS)**, that requires investor-owned utilities, electric service providers, and community choice aggregators to procure an increasing percentage of eligible renewable energy resources. Another significant change in the energy services industry is the increasing number of communities choosing or exploring **Community Choice Aggregation (CCA)**. CCA is an effort wherein cities and/or counties aggregate the buying power of individual electric customers within a defined jurisdiction, effectively transferring the electricity procurement responsibilities from the incumbent utility to the local agency.

Existing CCAs include Marin Clean Energy and Sonoma Clean Power, which offer their customers cost savings through a lower electricity rate while also boasting a higher percentage of renewable electricity production when compared to PG&E. Public agencies also see joining or forming a CCA as a viable method of achieving their **climate action goals**.

Considering that California consistently ranks as the second highest gas-consuming state in the nation, it is logical the natural gas market will undergo a similar transformation by eventually adopting a regulation similar to the RPS for electricity. Most recently this has been demonstrated in the efforts put forth introducing 2015's SB-687 ('Renewable Gas Standard'). Although the bill eventually died in committee, it is likely that this issue will resurface in the near future.

As a publicly owned program with nearly twenty years of gas pool operation and regional engagement, ABAG POWER is in a strong position to continue convening local governments to identify regional priorities.

# CURRENT BUDGET

ABAG POWER's operating budget is presented to the Executive Committee for approval every fiscal year. At this time, the Executive Committee also formally reviews the program's stated goals and gas purchasing strategy to ensure the adequacy of the proposed budget for meeting the goals.

The budget includes variable expenses such as the Cost of Energy Used and PG&E's Pass-Through Costs that are directly correlated to the program's gas usage. Program expenses, including ABAG fees, are primarily fixed administrative costs independent of program usage. These costs fund staff time for program operations like gas purchasing and scheduling, billing data validation, customer service, and program development.

By executing the Joint Powers and Natural Gas Aggregation agreements, participants agree to assume financial responsibility for their share of costs incurred through program operation. The program is structured such that it does not incur losses or reap profits. Excess revenue is returned to members through the true-up process in the form of a decreased monthly invoice or in certain cases, a disbursement.

Provided that an agency is a current ABAG member, there are no membership dues for ABAG POWER participants.

**FY 2015-16**

## REVENUES

Sale of Energy	\$ 7,289,784
Interest Income - Banks/LAIF	9,000

## Total Income

**7,298,784**

## COST OF ENERGY

Cost of Energy Used	3,216,688
PG&E Pass-Through Costs	3,640,504

## Total Cost of Energy

**6,857,192**

## PROGRAM EXPENSES

Billing Costs, External	10,500
Scheduling Agent Fees	16,800
ABAG Fees	390,292
Interest Expense/Bank Charges	9,000
Legal Expenses, External	15,000

## Total Program Expenses

**441,592**

## Total Expenses

**7,298,784**

**Core Total Rate (\$/therm):**

**\$1.018**

**Non-core Total Rate (\$/therm):**

**\$0.460**

# HISTORICAL FINANCIAL STATEMENTS

STATEMENT OF NET POSITION	FY 2013	FY 2014	FY 2015
<b>ASSETS</b>			
Cash and Cash Equivalents	\$ 2,786,288	\$ 2,920,773	\$ 3,907,913
Receivable from Members and Others	214,363	399,942	278,130
Interest Receivable	1,431	1,201	1,561
Natural Gas Inventory	180,608	178,082	252,740
<b>Total Assets</b>	<b>3,182,690</b>	<b>3,499,998</b>	<b>4,440,344</b>
<b>LIABILITIES</b>			
Accounts Payable	386,197	496,364	249,045
Members' Working Capital Deposits	2,000,785	2,000,785	2,000,785
Deferred Income (Accrued True-up)	795,708	1,002,849	2,190,514
<b>Total Liabilities</b>	<b>3,182,690</b>	<b>3,499,998</b>	<b>4,440,344</b>
<b>NET ASSETS</b>	<b>-</b>	<b>-</b>	<b>-</b>

# ESP CONSOLIDATED BILLING

ABAG POWER uses "Energy Service Provider (ESP) Consolidated Billing" for members of the natural gas pool. The result of this billing option is that each member receives one invoice sent by ABAG POWER.

The invoice includes both POWER's natural gas commodity cost and PG&E's pass-through costs. Applicable pass-through costs vary depending on the account's rate schedule (determined by PG&E), but typically include transportation charges, customer charges, public purpose program surcharges, franchise fees, and utility user taxes. **There are no "extra" charges imposed by PG&E for CTA customers.**

As a member of ABAG POWER (or any CTA) participants remain entitled to and are encouraged to participate in energy efficiency programs. Participation in the gas pool also does not adversely affect an agency's ability to claim rebates for energy saving measures.

Additionally, participation in POWER's natural gas program assures no change in a participant's current priority of service with PG&E, quality of natural gas, overall reliability of service, and performance of maintenance. PG&E continues to provide meter reading, "on the ground" repair and maintenance, and emergency response to all participants.

Natural gas flows through pipelines to arrive at public facilities like city halls, police and fire stations, hospitals, and zoos. Common uses for natural gas include space and water heating, cooking, transportation fuel, and electricity generation.

The public facility's usage data is transmitted to PG&E either manually by a meter read technician, or electronically through a SmartMeter. Each meter has its own "read schedule" and most *do not* follow the calendar month.

PG&E adds transportation and other regulated costs to the usage data and transmits the data to ABAG POWER's "value-added network" where it is then translated into a standardized format.

ABAG POWER consolidates PG&E's pass-through costs and usage data, adds a commodity cost for the natural gas, and sends a monthly invoice that summarizes this data for each account in the member's portfolio.

# LEVELIZED BILLING & TRUE-UP PROCESSES

ABAG POWER maintains its own internal accounting system that provides for "levelized" billing. Every member is invoiced each month for an amount that represents 1/12th of the annual cost estimate for that member.

Along with the monthly levelized invoice, the program sends each member a detailed report showing the actual usage for each account.

After the end of each fiscal year, each account's actual costs are compared to its levelized billings, and a credit or charge is then applied to "true-up" any difference.

POWER's billing structure differs from PG&E most notably in that end-users are not immediately affected by short-term market price fluctuations. In most scenarios, a member's payable invoice amount will change only twice a year: once when levelized charges are calculated at the change of a fiscal year, and once when the prior fiscal year's true-up is complete. Each month, the total amount due to ABAG POWER represents one twelfth of the member's annual cost estimate.

The savings for each agency will vary depending upon the energy usage pattern of the agency, the variations of the seasons, and associated market pricing. Program savings can never be guaranteed due to the interdependence of these three variables, however the program has historically been able to offer competitive pricing and more stable rates.

Most program participants find that aggregating their natural gas accounts provides a simplified approach to budgeting for their energy needs and expenses, information that may be hard to gather otherwise. In 2014, POWER conducted a member survey that revealed 64% of respondents are not using internal energy management software to track usage, cost, or environmental footprint within their agency. ABAG POWER allows members to have the data typically provided with Energy Management software in an easily accessible and understandable format.

# IMPORTANT PROGRAM METRICS

ABAG POWER constantly evaluates program performance to ensure it is meeting the needs of its stakeholders.

In recent years, POWER has shown a decline in natural gas usage among its members due primarily to warmer winters. As U.S. production has continued to surge during this same time period, the market price of natural gas plummeted to near all-time lows.

Meanwhile, pass-through costs have significantly increased as PG&E continues attempts of modernizing its delivery infrastructure through extensive testing, inspection, and upgrading of pipelines, storage facilities, and control systems. PG&E is required by law to ensure the pipeline infrastructure operates safely.

Program expenses are primarily administrative and have remained fairly static over the years. As the needs of POWER evolve, staff work to further streamline existing processes and implement cost-saving measures.

It's also important to understand and identify the primary gas uses within the program so staff can continue to develop and provide the knowledge base necessary for educating and advising members. Staff monitor relevant regulatory proceedings, technological developments, and industry news, and provide updates to the membership.

	FY 2014	FY 2015	FY 2016 BUDGET
<b>PERCENTAGE OF TOTAL EXPENSES</b>			
Natural Gas Commodity Cost	54.2%	48.8%	44.0%
PG&E Pass-Through Costs	39.6%	44.9%	49.8%
ABAG Fees	5.5%	5.7%	5.3%
<b>COMMODITY RATE (\$/therm)</b>			
Core	0.5096	0.5005	0.4305
Non-Core	0.4939	0.4810	0.4023
<b>TOTAL PROGRAM USAGE (therms)</b>			
Core	7,318,881	6,156,294	6,868,771
Non-Core	578,068	685,443	645,294
<b>PERCENTAGE OF TOTAL LOAD BY SECTOR</b>			
Residential	1.1%	1.0%	
Small Commercial	81.0%	77.8%	
Large Commercial	8.9%	9.6%	
Natural Gas Vehicle	1.7%	1.6%	
Non-Core	7.3%	10.0%	

# INDUSTRY UPDATE

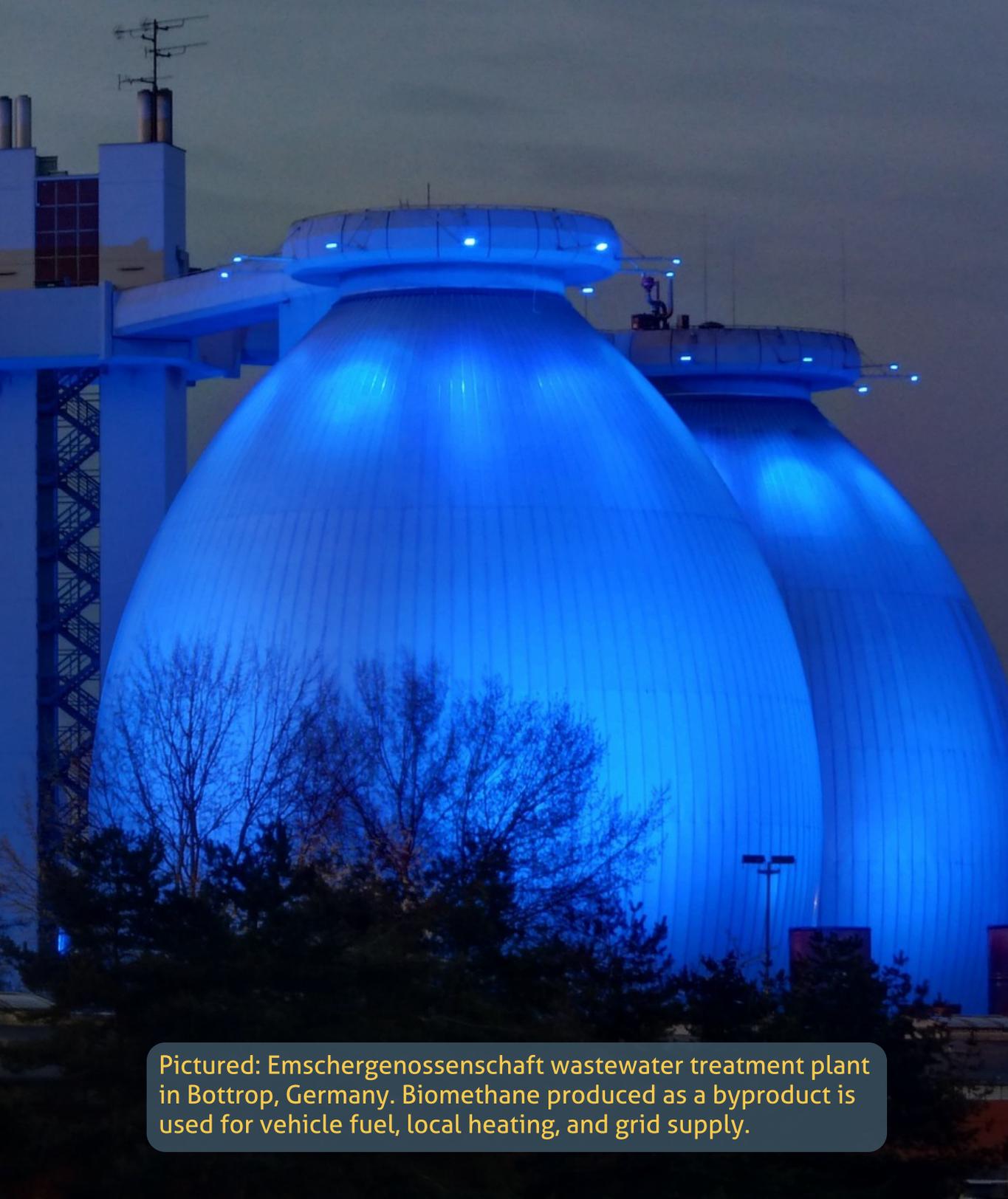
## Biomethane - A Natural Gas Successor?

While it is true that natural gas is a clean alternative to oil and coal, it remains a major greenhouse gas contributor because of the carbon dioxide released when the gas is burned. Natural gas is a fossil fuel and although it is naturally occurring, it is not considered renewable because of the time required by natural production methods. Unlike wind or solar, natural gas is a finite resource.

There is hope, however, as an increasingly popular substitute, biogas, continues edging closer to market viability. **Biogas** is created through a natural process in which organic waste decomposes without oxygen, a common occurrence in landfills, dairies, and sewage treatment plants. Raw biogas consists primarily of methane, carbon dioxide, and smaller amounts of nitrogen, oxygen, and hydrogen, but can be processed or upgraded to increase the percentage of methane in the gas by removing carbon dioxide and any trace components. The 'upgraded' biogas is then referred to as **biomethane**, which contains a comparable or lower amount of trace constituents as traditional natural gas, and therefore meets pipeline quality specifications and may be directly injected into existing gas infrastructure.

Although there are environmental advantages to using and producing biomethane, biogas remains expensive and typically requires lengthy purchase contracts. It is also difficult to produce or scale to an industrial level.

Staff will continue to monitor the economic viability of this environmentally friendly option.



Pictured: EmscherGenossenschaft wastewater treatment plant in Bottrop, Germany. Biomethane produced as a byproduct is used for vehicle fuel, local heating, and grid supply.

# ABAG POWER EXECUTIVE COMMITTEE

**Julie Bueren**

County of Contra Costa

**Dave Brees**

City of Los Altos

**Tonya Gilmore**

City of Orinda

**Christopher Schroeder**

City of Milpitas

**Angela Walton**

City of Richmond

**Richard Sealana**

City of Union City

# ABAG POWER PRINCIPAL STAFF

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Program Assistant

[RyanJ@abag.ca.gov](mailto:RyanJ@abag.ca.gov)

**Courtney Ruby**

Interim Finance Director

# WE ARE GRATEFUL

FOR THE INDIVIDUALS AND BUSINESSES WHOSE  
PARTICIPATION MAKE OUR WORK POSSIBLE

## BOARD OF DIRECTORS

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Ray Chan

George Rodericks

Karin Schnaider

Julie Bueren

Erin Cooke

Mike Sung

Jennifer Mennucci

Rene Mendez

Magda Gonzalez

David Biggs

Vanessa Cooper

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Chip Taylor

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