

# ABAG Publicly Owned Energy Resources (ABAG POWER)

## Board of Directors

October 30, 2019

Agenda Item 5.a.

### Natural Gas Aggregation Program

**Subject:** Staff Report on 2018-19 Natural Gas Program

**Background:** Since 2002, the gas program has operated with the dual and often competing goals of cost savings and price stability. This year, ABAG POWER's total rate was 10.5% higher than Pacific Gas and Electric Company's (PG&E) similar rate for small commercial accounts (GNR-1). Due to the levelized billing structure, the program's monthly rates were more stable than PG&E's rates for the year.

During the year, ABAG POWER purchased the entirety of its gas on daily and monthly markets in California, Canada, and Oregon. This blend of short-term gas purchases resulted in a weighted average cost of gas for the year of \$3.18/Dth, an increase of 12% from the prior year. This increase was partially offset due to aggressive withdrawals from gas storage and purchases made in Canada for lower prices than were available domestically.

Natural gas prices were very volatile throughout winter and spring of 2018-19, particularly during November, December, and March:

- Daily prices per dekatherm (Dth) doubled from November (\$3/Dth) to December (\$6/Dth) before peaking at \$17.8/Dth in March, prices not seen in five years, and since the energy crisis before that.
- Prices began to decline later in March, continuing through June to the year's low (\$1.64/Dth).
- The five-year daily average market price at PG&E's Citygate is \$3.19/Dth. PG&E's average rate was \$3.21/Dth during this period.

Staff and the Executive Committee have a firm understanding that an inability to achieve cost savings presents a significant issue for the long-term prospect of the program. The Committee has continued to evaluate and modify the gas purchasing strategy to provide cost savings. Within the past year, efforts have included shifting from fixed-price purchases into the short-term market, entering international purchasing markets, and investigating pipeline capacity brokering.

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#### Long Term Program Metrics

The program's average annual savings for the period July 1997 to June 2019 was -0.2%, excluding proceeds (\$557,000) from gas litigation settlement in 2009.

#### Discussion Items:

The goals of ABAG POWER's Natural Gas Program are to provide natural gas at a rate competitive with, or less than, the default provider (i.e. PG&E), while at the same time providing a rate that is stable and predictable.

In recent years, membership surveys have indicated that cost savings is 'very' important to member agencies. However, the survey also revealed that there is not a clear preference towards the goal of price stability over cost savings. Surveys have also indicated significant interest in sustainability initiatives, such as Renewable Natural Gas. The Executive Committee and staff have continued to evaluate the Program's purchasing strategy and program offerings to best maximize the goals of the program and its members.

#### Recommended Action:

The ABAG POWER Board of Directors is requested to review and comment on the discussion items.

#### Issues:

None.

#### Attachments:

Staff Report on 2018-19 Natural Gas Program (Presentation)

#### Reviewed:

  
Brad Paul

# ABAG POWER

Board of Directors Meeting  
Staff Report on Natural Gas Program

Ryan Jacoby  
Program Manager  
October 30, 2019



## History & Services

- 1 Started in **1996** by the Association of Bay Area Governments (ABAG) and local governments to provide **aggregated electricity and natural gas procurement for municipal facilities**
- 2 In-house billing and customer service, gas purchasing, and transportation
- 3 Program competes against Pacific Gas and Electric Company (PG&E) to provide **lower and more stable rates** for municipal facilities



## Membership & Governance

### 38 Participating Entities

Each city, county, or special district assigns a voting delegate to the Board of Directors which meets annually

### 7-member Executive Committee

Meets bi-monthly to oversee

- Budget and operations
- Gas purchasing strategy
- Sustainability initiatives
- Regulatory proceedings

### Executive Committee

Chair: Dave Brees, City of Los Altos

Vice Chair: Angela Walton, City of Richmond

### Committee Members

- Chris Schroeder, City of Milpitas
- Dan Schoenholz, City of Fremont
- Diana Oyler, County of Contra Costa
- Doug Williams, City of Santa Rosa
- Misty Mersich/Gilee Corral, City of Cupertino

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## Officers and Principal Staff



Therese W. McMillan  
ABAG/MTC Executive Director



Brian Mayhew  
Chief Financial Officer



Brad Paul  
Deputy Executive Director,  
Local Government Services



Adrienne Weil  
General Counsel



Jennifer Berg  
Assistant Director,  
Energy Programs Manager



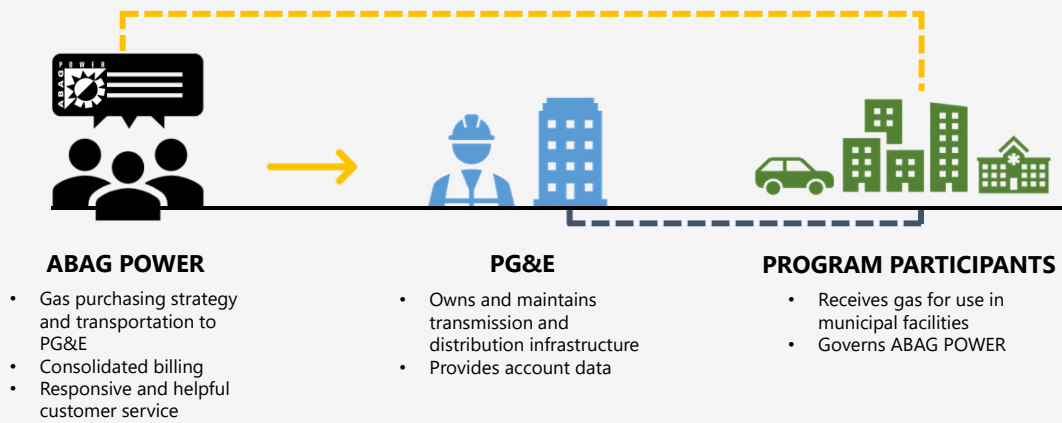
Ryan Jacoby  
Program Manager



Cindy Chen  
Energy Programs Coordinator

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## How it Works



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## Daily Operations

### Gas Storage Requirements

- CTA/PG&E
- Transitioning to Independent Storage Provider

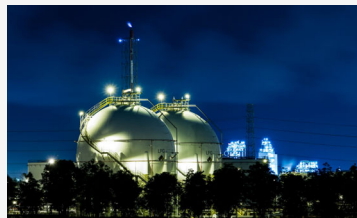
### Scheduling

- Daily and monthly balancing

### Competitive Supply Agreements

- Nine domestic vendors
- Three international vendors

### Usage & Cost Validation



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## Program Benefits

### Public Ownership

- Trustworthy and transparent
- Adaptable to changing energy landscape

### In-house Customer Service

- Account management & consolidated billing
- Rate analysis

### Regional Program Structure

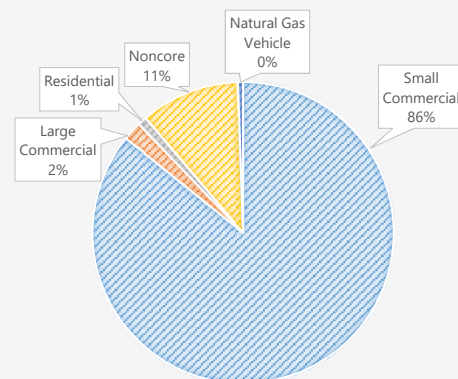
- 38 participating public entities
- Funding opportunities and regulatory involvement



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## Fiscal Year 2018-19 Review

Metric	FY 18-19	FY 2017-18 Comparison
Member Agencies	38	No Change
Core Accounts	768	+1%
Noncore Accounts	3	No Change
Total Usage (therms)	6.74 million	-2%
Core Usage	6.02 million	
Noncore Usage	0.72 million	



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## Fiscal Year 2018-19 Review

### Significant Program Changes

- ✓ First fiscal year purchasing exclusively in the short-term market
- ✓ Entered international purchasing markets
- ✓ Retirement of Jerry Lahr (December 2018; 18 years of service)

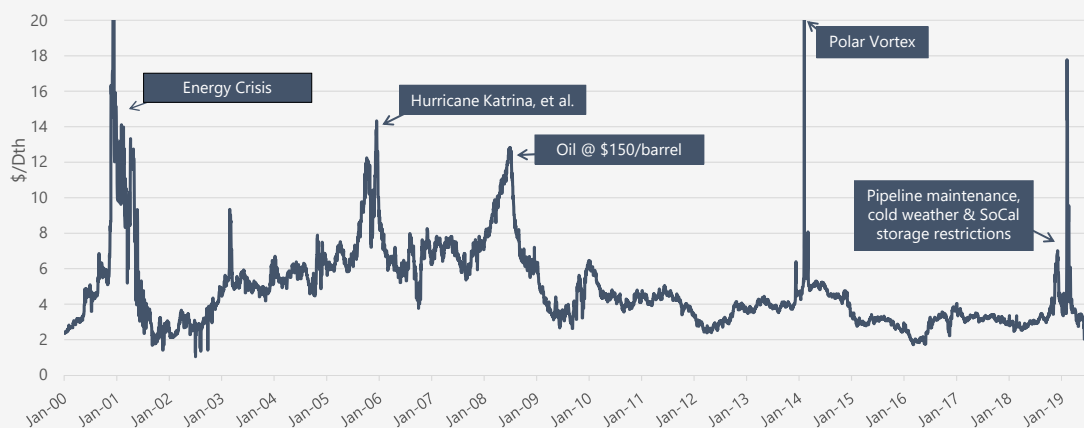
### Annual Rate Comparison

- Rates were more stable than PG&E due to the levelized payment system
- 10% higher relative to PG&E's G-NR1 rate

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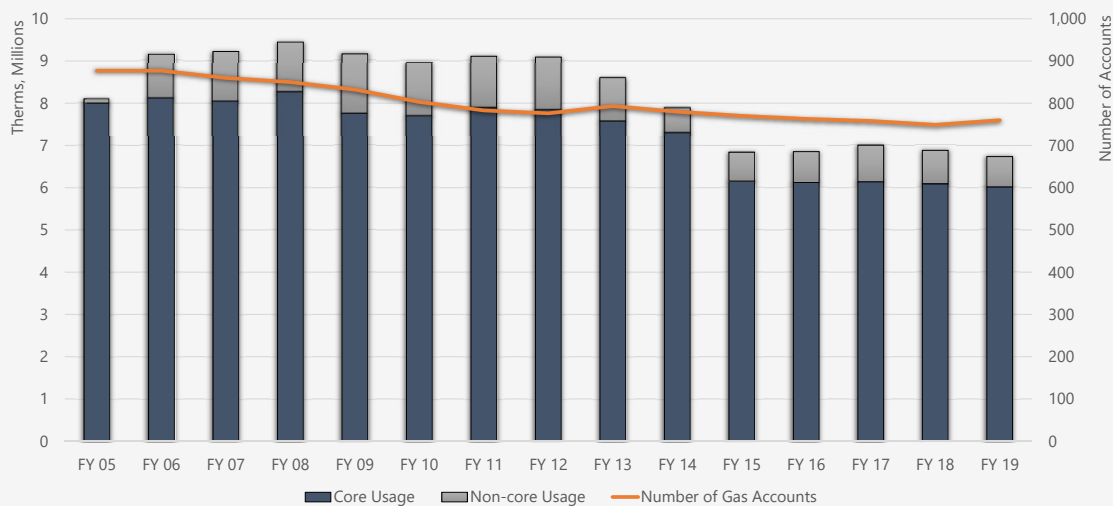
## Local Market Volatility

PG&E Citygate – 'Gas Daily' Daily Average



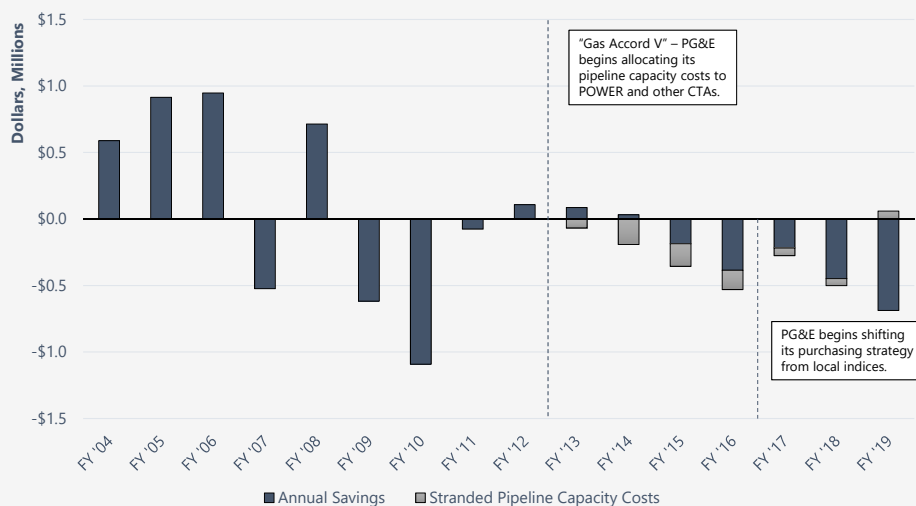
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## Long Term Trends



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## Long Term Trends



Since inception, ABAG POWER has occasionally achieved its goal of cost savings.

This goal is more difficult to reach given recent challenges, including:

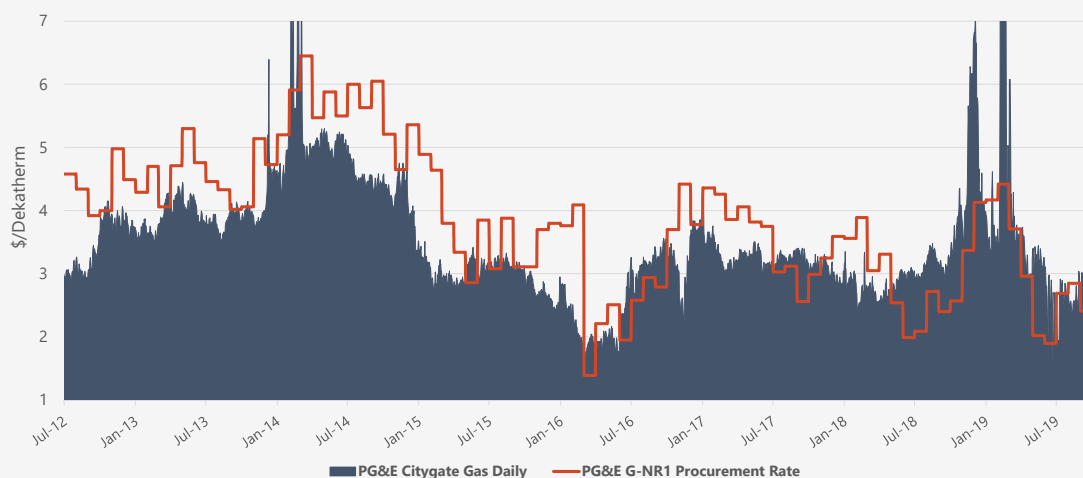
- Declining usage
- Aggressive purchasing strategies from PG&E
- 'Stranded' costs and regulatory changes

PG&E begins shifting its purchasing strategy from local indices.

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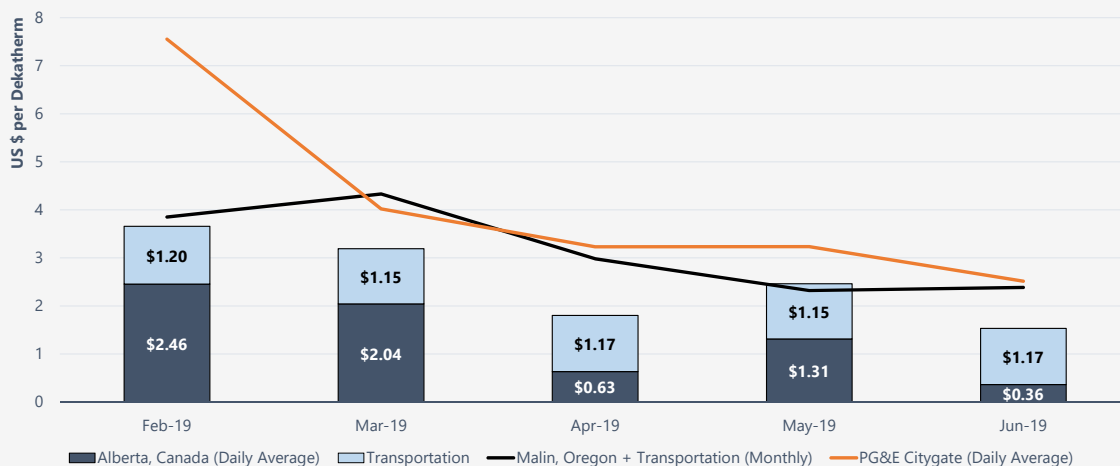
## Daily Index Pricing vs. PG&E's Monthly Procurement Rate



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## Canadian Natural Gas Supply & Transportation

### Price Comparison



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## Canadian Natural Gas Supply & Transportation

### Business Requirements

#### Import & Export Authorization

Alberta's Energy Regulator  
Canada's National Energy Board  
U.S. Department of Energy  
U.S. Customs and Border Protection

#### Licenses

Canadian Business Number  
Goods and Services Tax Account

#### Insurance

Continuous Import Bond & Brokerage

### Transportation & Supply

#### Pipeline Use & Capacity Acceptance Agreements

NOVA Gas Transmission Ltd. (Alberta)  
TransCanada Foothills (British Columbia)  
Gas Transmission Northwest (U.S.)

#### Daily Gas Nominations

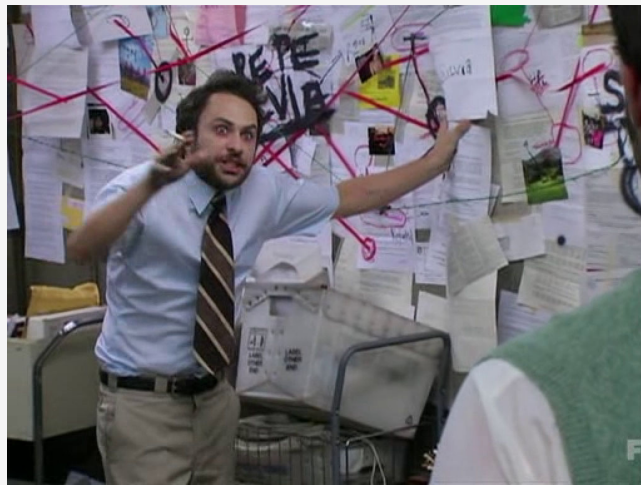
Contract Amendment for Natural Gas Scheduling

#### Market Index Publication

Canadian Enerdata

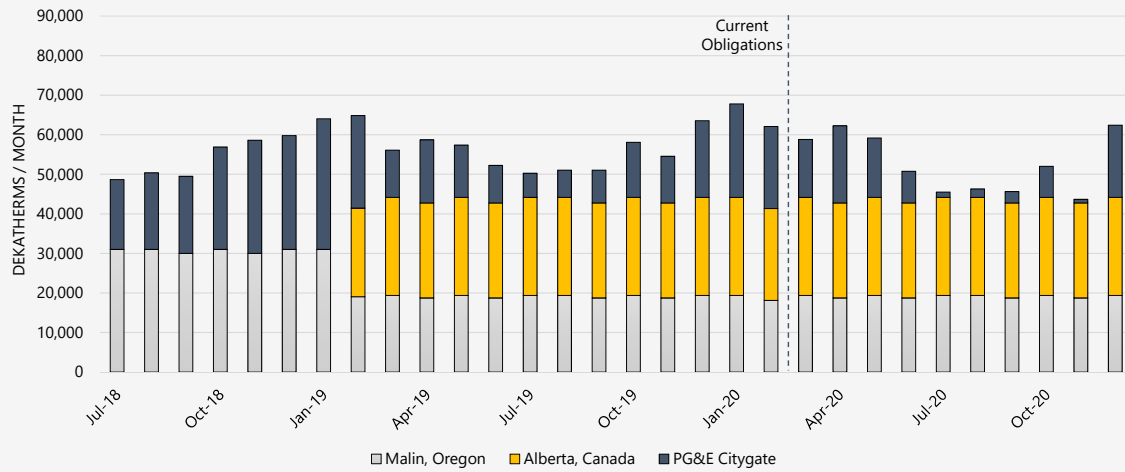
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## Canadian Natural Gas Supply & Transportation



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## Gas Supply by Purchase Location



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## Renewable Natural Gas (RNG)



## RNG 101

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- Biogas is a mixture of gases produced by decomposition of organic materials – a naturally occurring process at dairies, landfills, and wastewater treatment plants. Biomethane, or renewable natural gas, is biogas that has been upgraded to meet pipeline injection standards.
- RNG is chemically similar to natural gas but avoids the emissions and processes (drilling, fracking) associated with fossil-based gas extraction.
- Producing RNG from methane that would otherwise escape into the atmosphere is particularly beneficial.

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## RNG - Barriers to Adoption

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- Supply is driven by transportation fuel as petroleum/diesel substitutes
  - Expensive to purchase grid-connected supply
  - Federal and state transportation fuel incentives: RFS & LCFS
  - Limited supply
- Pipeline quality upgrading and interconnection is expensive
  - Often more economical to use RNG for electricity generation (onsite consumption or PPA)
- Policy
  - Decarbonization push
  - RNG uses existing, expensive, and imperfect pipeline and storage infrastructure

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## RNG - Next Steps

- Continue to monitor supply
- Monitor regulatory proceedings involving interconnection and certification processes
- Examine opportunities for aggregated purchases with similar entities



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## Natural Gas Program Issues and Considerations

INDUSTRY DRIVERS	CHALLENGES	OPPORTUNITIES
Domestic Supply	Fuel Switching	Public Oversight
Global Warming	Pricing	Renewable Natural Gas
Policy	Pipeline Capacity	Transportation Fuel

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## Looking Forward

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- 1 Evaluate and implement additional purchasing strategies to achieve cost savings**
  - ✓ Flexibility to purchase at different receipt points and pipeline paths
- 2 Monitor and act on funding and regulatory opportunities**
  - ✓ Renewable natural gas proceedings and procurements
  - ✓ Decarbonization policies

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## Q&A

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# Questions & Comments

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