Purchased Power and Fuel Adjustment Clauses

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Need For FAC and PPA

- Protect margins from changes in fuel and/or purchased power cost
- Fuel cost variability
  - Natural gas
  - Coal
  - Oil
- Purchased power cost variability
  - Wholesale rate increases
  - Changes in wholesale rate design (demand/energy relationship
  - Changes in purchase load factor due to weather or the addition or loss of a large load

Regulatory Precedent

- FERC and many state jurisdictions allow for some type of fuel cost recovery mechanism
- Allows the utility to recover its more volatile costs (fuel) without having to change base rates each time its costs change
- Dollar for dollar matching of cost recovery with costs
- Does not permit additional margin recovery
- Regulatory review to ensure proper administration of the mechanism

Regulatory Criteria

- An authoritative 1991 report issued by the National Regulatory Research Institute, the research arm of the National Association of Regulatory Utility Commissions (NARUC) identified the following three reasons for implementing FACs/PPAs/PGAs:
  - The cost constitutes a significant or large component of the utility's cost
  - The cost changes are volatile and unpredictable
  - The cost is largely outside the control of the utility

Fuel Adjustment Clause (FAC) vs. Purchased Power Adjustment Clause (PPA)

- **Fuel Adjustment Clauses**
  - Generally found in regulated jurisdictions
  - Used by companies who own generation.
  - Allows for the recovery of fuel and purchased power energy related expenses
  - Is generally calculated as a deviation from a base level of expenses included in base rates, although in some cases the FAC includes 100% of fuel and purchased power energy

Fuel Adjustment Clause (FAC) vs. Purchased Power Adjustment Clause (PPA)

- **Fuel Adjustment Clauses continued**
  - Calculated on a per kWh basis
    - For example, a charge or credit per kWh equal to the amount by which the utility's actual fuel costs deviate from 2.0¢/kWh
  - True-up mechanism to ensure dollar for dollar recovery of costs
  - Is usually calculated on a monthly basis using a single month of expenses
  - Production assets and demand related costs are in base rates and do not impact the FAC

Fuel Adjustment Clause (FAC) vs. Purchased Power Adjustment Clause (PPA)

- **Purchased Power Adjustment Clause (PPA)**
  - Used by companies who do not own a significant amount of generation
  - Allows recovery of purchased power and any fuel
  - Is generally calculated as a deviation from a base level of expenses included in base rates, although in some cases the PPA includes 100% of purchased power and fuel cost

Fuel Adjustment Clause (FAC) vs. Purchased Power Adjustment Clause (PPA)

- **Purchased Power Adjustment Clause continued**
  - Generally calculated on a per kWh basis, although a small percentage of some utilities will have both a demand component and an energy component
    - For example,a charge or credit per kWh equal to the amount by which the utility's actual purchased power costs deviate from 4.0¢/kWh
  - Is generally not calculated on a monthly basis based on a single month of cost because of the wide swings in the adjustment from month to month due to production assets and demand costs being included in the purchased power cost

Fuel Adjustment Clause (FAC) vs. Purchased Power Adjustment Clause (PPA)

- **Purchased Power Adjustment Clause continued**
  - May or may not have a true-up mechanism that ensure dollar for dollar recovery of cost
  - Occasionally see margin as a component

How They Work

- Determine the unit base cost that was included in base rates
- Look at actual or estimated costs over a specified period (monthly, quarterly, annually)
- Those costs are unitized, usually over sales

How They Work

- The unitized actual cost is then compared to the unit base cost built into base rates
  - If the actual unit cost is higher than what was included in base rates, a charge will be included on future bills
  - If the actual unit cost is lower than what was included in base rates, a credit will be included on future bills

How They Work

- True-up mechanism that compares the actual cost to what has been recovered through base rates and the application of the PPA
  - If the utility has recovered less than its actual cost, a charge will be set up to recover the difference over a specified period of time
  - If the utility has recovered more than its actual cost, a credit will be set up to refund the difference over a specified period of time

Types of Purchased Power Adjustment Mechanisms

- Calculated annually
- Calculated quarterly
- Calculated bi-annually
- Calculated monthly
- Calculated monthly using a 12 month rolling average

Calculated annually

- Look at forecasted or historical Purchased Power Costs for a 12 month period
- Factor is fixed for entire year
- Should be “Trued-up” at end of the year
- No monthly swings in the factor
- Utility absorbs the swings

Calculated monthly

- Calculate the factor each and every month using a single expense month
- Different factor each month
- Can be calculated exactly if utility can calculate the factor based on actual billings that will apply each month
- Otherwise a true-up is preferrable
- Can have extreme fluctuations from month to month (maybe 1.5 cents or more)
- Customer absorbs the swings

Calculated using a 12 month rolling average

- Calculate the factor every month
- Factor varies every month, but not as much as with using a single month's cost
- True up at end of the year
- Both customer and cooperative absorb the swing

12 month rolling average

Month	12-Month Purchase Power Cost	12-Month Sales	Average Purchase Power Cost	Base Rate Purchase Power Cost	PPA
Jan	$9,100,000.00	181,900,000	0.05003	0.05000	0.00003
Feb	$9,600,000.00	191,800,000	0.05005	0.05000	0.00005
Mar	$9,200,000.00	184,300,000	0.04992	0.05000	(0.00008)
Apr	$9,300,000.00	185,800,000	0.05005	0.05000	0.00005
May	$8,900,000.00	177,900,000	0.05003	0.05000	0.00003
Jun	$9,000,000.00	179,850,000	0.05004	0.05000	0.00004
Jul	$9,400,000.00	188,090,000	0.04998	0.05000	(0.00002)
Aug	$9,500,000.00	189,900,000	0.05003	0.05000	0.00003
Sep	$9,600,000.00	191,850,000	0.05004	0.05000	0.00004
Oct	$9,700,000.00	193,900,000	0.05003	0.05000	0.00003
Nov	$9,700,000.00	194,039,000	0.04999	0.05000	(0.00001)
Dec	$9,800,000.00	196,000,000	0.05000	0.05000	-

Calculated using a 3 month rolling average

- Calculate the factor every month
- Factor varies every month, but not as much
  - More seasonal variances
- True up at end of the year
- Both absorb the swing

3 month rolling average

3 Month Rolling Average						
		Three Month		Rolling	Base Rate	
		Purchase		3-Month	Purchase	
		Power Cost	Three Month	Purchased Power	Power	
Month	Sales	2nd Prev Month	Sales	Cost	Cost	PPA
Jan	16,700,000	$2,104,000	40,670,000	0.05173	0.05200	(0.00027)
Feb	14,400,000	$2,256,000	42,650,000	0.05290	0.05200	0.00090
Mar	15,200,000	$2,388,000	46,950,000	0.05086	0.05200	(0.00114)
Apr	13,700,000	$2,426,000	48,250,000	0.05028	0.05200	(0.00172)
May	12,500,000	$2,311,000	46,300,000	0.04991	0.05200	(0.00209)
Jun	15,100,000	$2,120,000	43,300,000	0.04896	0.05200	(0.00304)
Jul	15,110,000	$1,970,000	41,400,000	0.04758	0.05200	(0.00442)
Aug	15,900,000	$2,049,000	41,300,000	0.04961	0.05200	(0.00239)
Sep	15,170,000	$2,375,000	42,710,000	0.05561	0.05200	0.00361
Oct	12,400,000	$2,672,000	46,110,000	0.05795	0.05200	0.00595
Nov	13,100,000	$2,556,000	46,180,000	0.05535	0.05200	0.00335
Dec	17,150,000	$2,289,000	43,470,000	0.05266	0.05200	0.00066

Formula for an PPA

PPA = (C/AS) – B +R

C= Total purchased power costs

AS = Actual retail sales

B = Purchased power in base rates

R = (Over)/under Recovery

Formula for an PPA
Over / (Under) Recovery

R= (PPB + BAL – PPR) / S

PPB = Purchased Power Cost billed from power supplier.

BAL= (R * Kwh sales applicable to R) – (PPB– PPR + BAL) from the previous 12 month period.

PPR= Purchased Power Cost recovered from customers through the application of base rates and the PPA.

S = Expected Kwh Sales for the next billing period.

Why Adopt FACs and PPAs?

- Many utilities eliminated FACs and PPAs to capture the benefit of declining fuel and purchased power costs
- With fuel and purchased power price volatility, utilities need FACs and PPAs to prevent price volatility from degrading their financial position

Benefits of Efficient FACs and PPACs

- Sends proper price signals to customers
- Avoids constantly cycling between rate increases and rate decreases
- Allows cooperatives to operate with a lower margin