Dominion Energy®
IRP Technical Conference

April 2, 2019

Dominion Energy®

IRP 2019 Schedule

- February 20, 2019 – Technical Conference
  - IRP Standards and Guidelines
  - Review of 2018 Order
  - Proposed 2019 IRP Outline
  - Renewable Natural Gas Update
  - Wexpro Well Freeze-offs
- April 2, 2019 – Technical Conference
  - Heating Season Review
  - Long Term Planning
  - Normal Heating Degree Days Update
  - Rural Expansion
  - Rate Case Preview
- April 25, 2019 – Technical Conference
  - RFP Recommendations (Confidential)
  - Supply Reliability Results (Confidential)
- May 29, 2019 – Technical Conference
  - Wexpro Matters (Confidential)
  - Integrity Management Update
- June 20, 2019 – Technical Conference
  - Presentation of Integrated Resource Plan

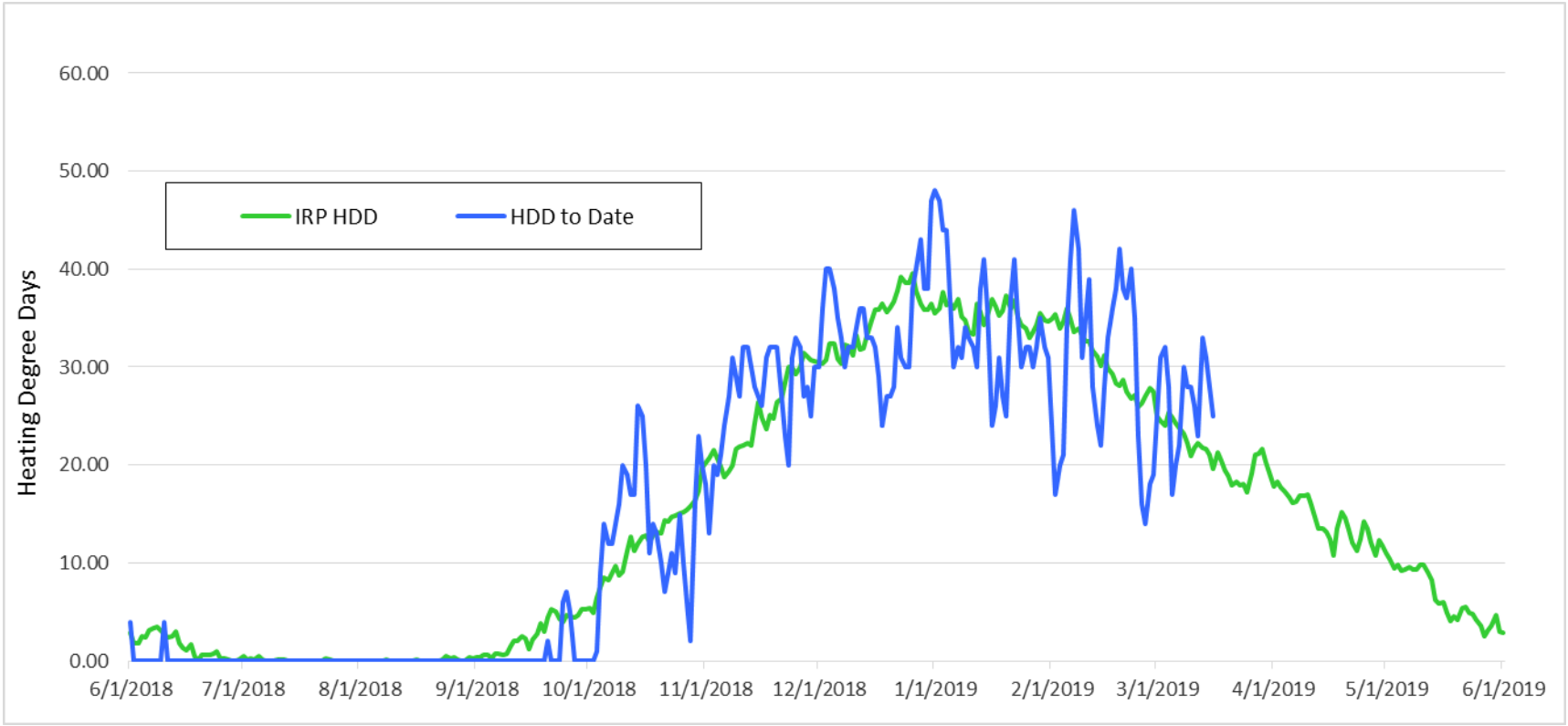
Dominion Energy®

Agenda

- Heating Season Review
- Long Term Planning
- Normal Heating Degree Days Update
- Rural Expansion
- Rate Case Preview

Heating Season Review

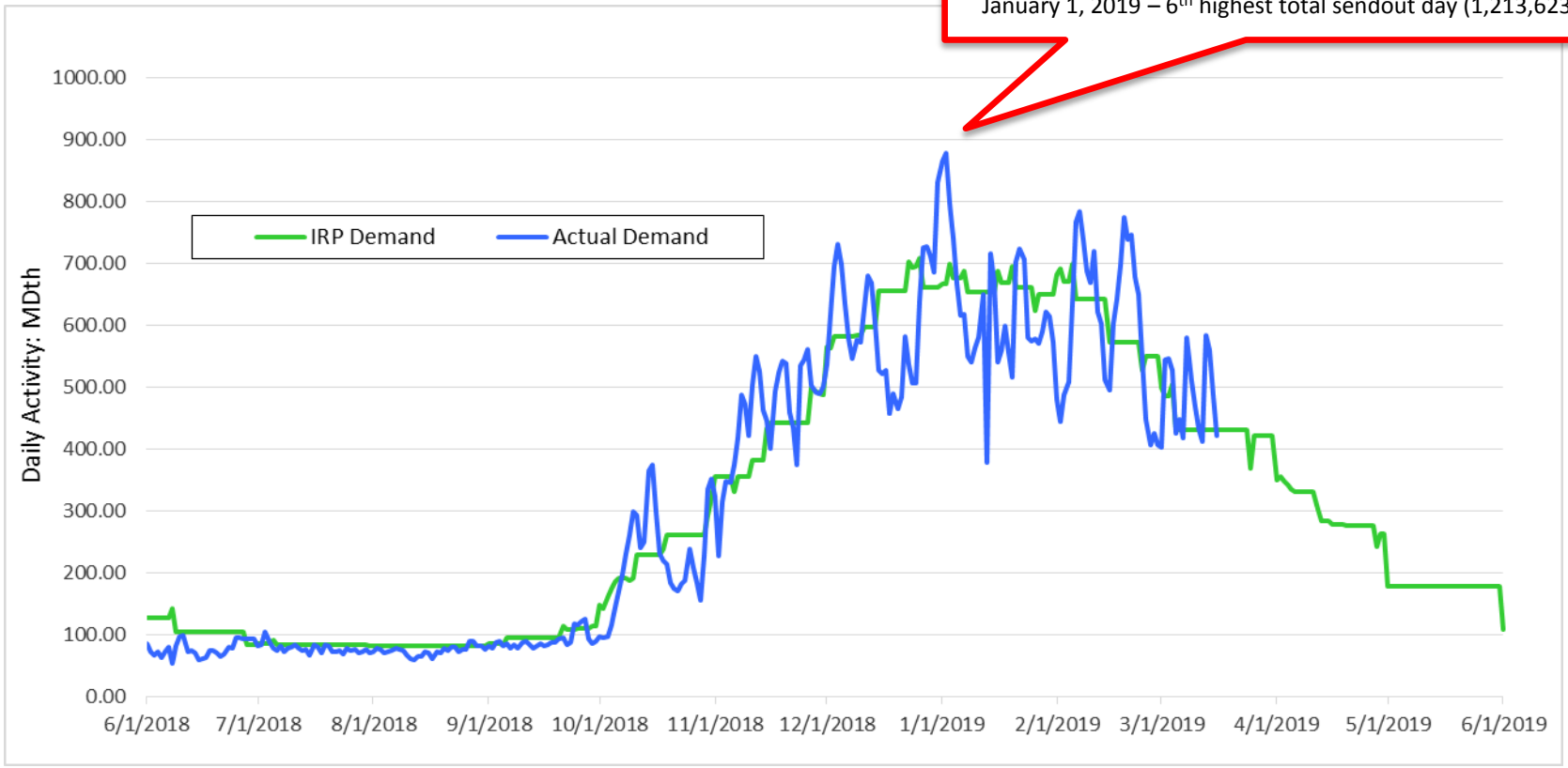
Heating Degree Days



Dominion Energy

Demand

January 2, 2019 – 5th highest total sendout day (1,221,318 Dth)
January 1, 2019 – 6th highest total sendout day (1,213,623 Dth)



Dominion Energy

Enbridge Pipeline Incident

- October 9, 2018 – 5:45 PM
  - Rupture of a 36-in pipeline from Canada
  - Parallel 30-in pipeline was shut down as well, but brought back into service at 80% of normal operating pressure
  - Reduced capacity from Canada by 1.3 Bcfd
  - October 31, 2018 – 36-in pipeline brought back to service at 80%
  - Constraints will continue as integrity work is completed on the line
  - Created a supply shortage

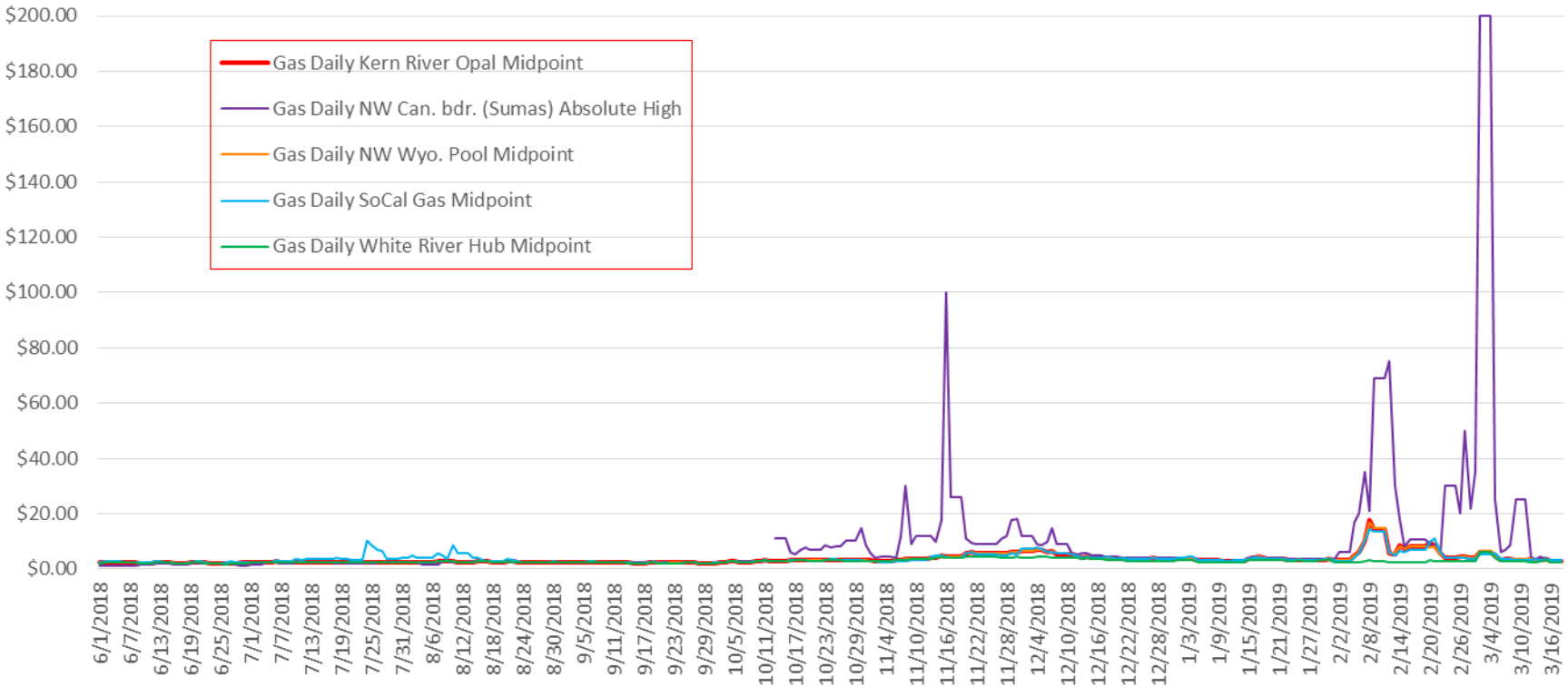
'It was huge': Enbridge gas pipeline ruptures, sparking massive fire and evacuation north of Prince George, B.C.

About 100 people were evacuated from the nearby Lheidli T'enneh First Nation, but most have now been allowed to return home

A pipeline has ruptured and sparked a massive fire north of Prince George, B.C. is shown in this photo provided by Dhruv Desai. *Dhruv Desai / THE CANADIAN PRESS*

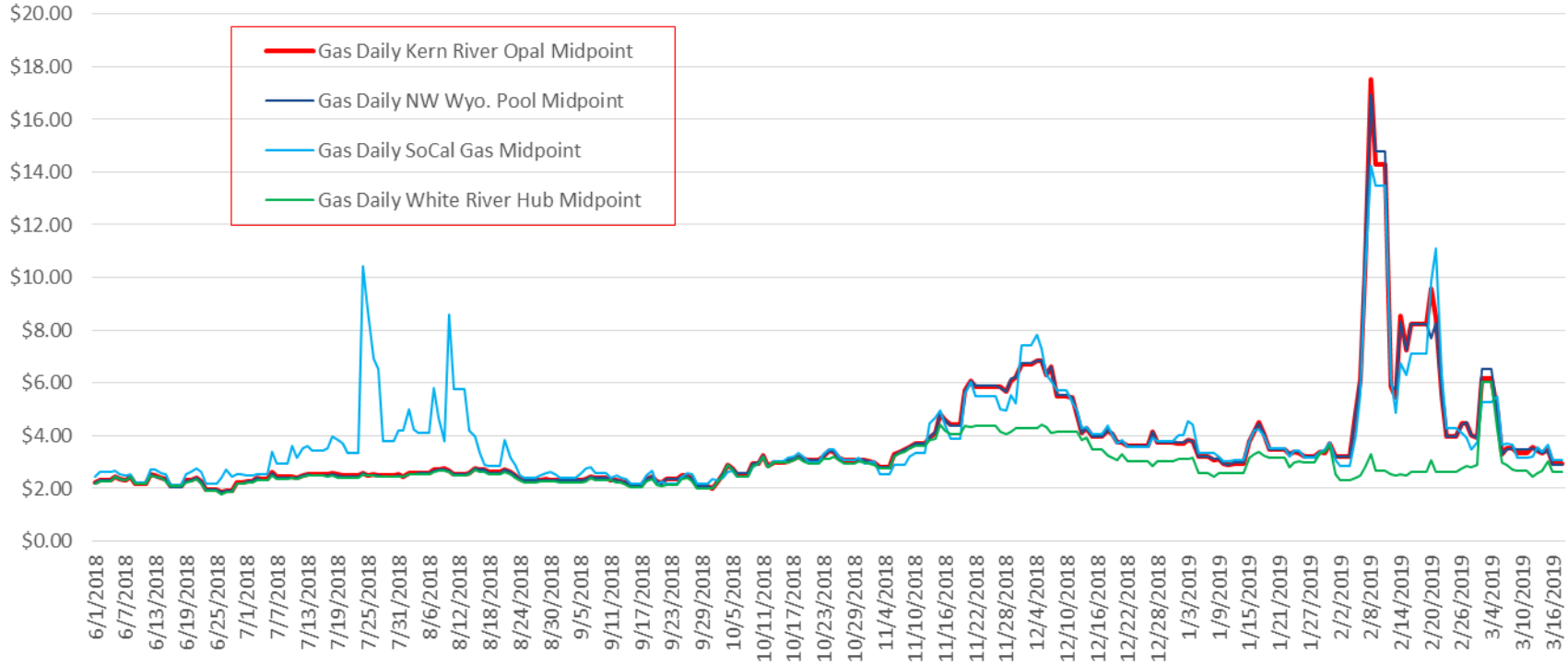
Dominion Energy

Pricing



Dominion Energy

Pricing

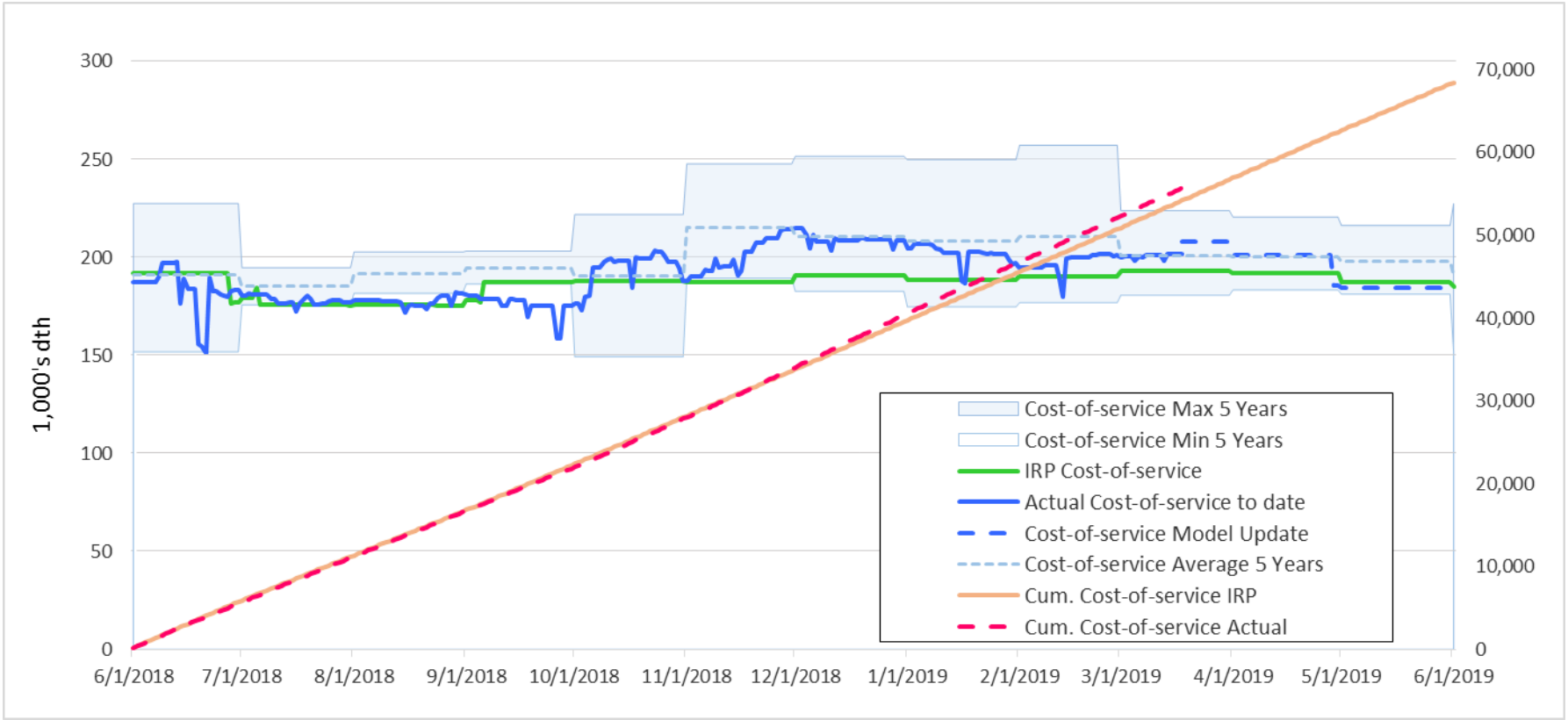


Dominion Energy

Index Prices

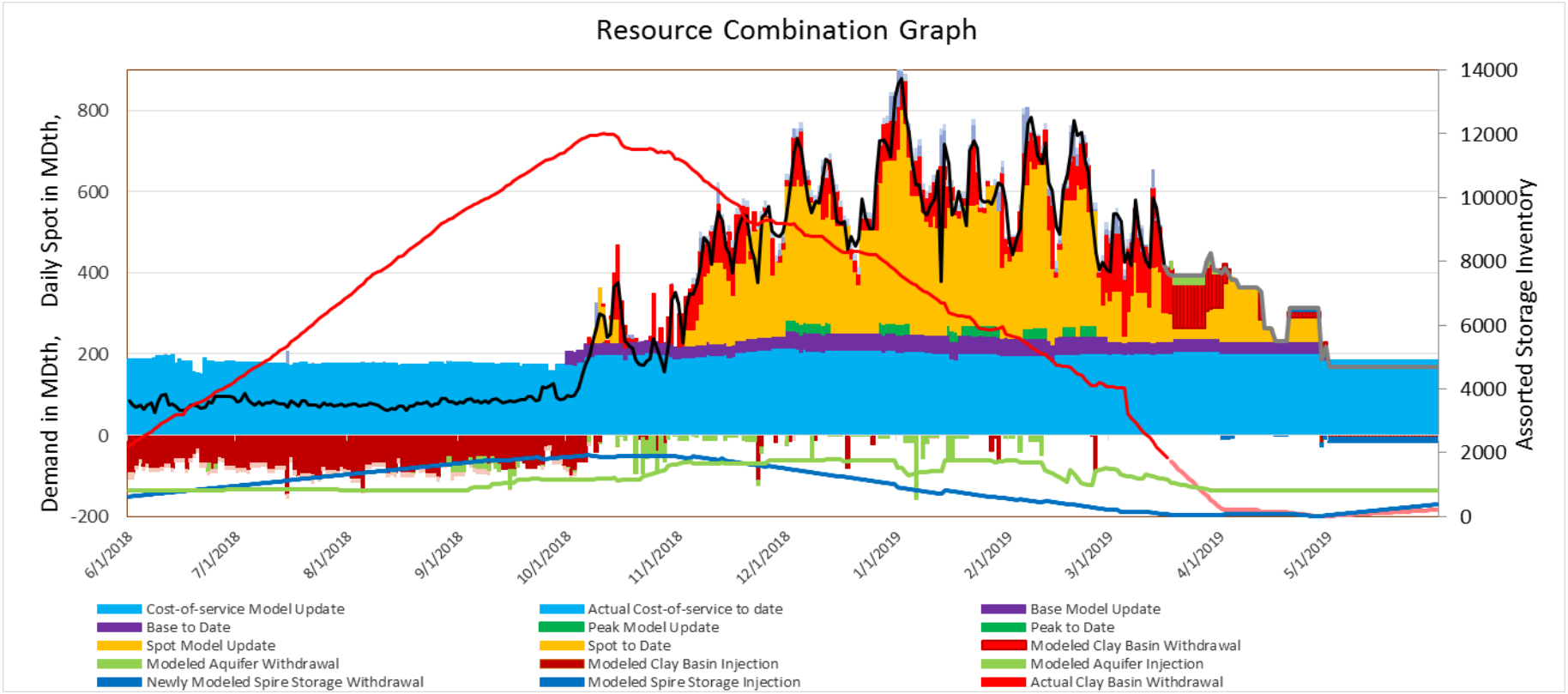
Dominion Energy

Cost-of-Service Production



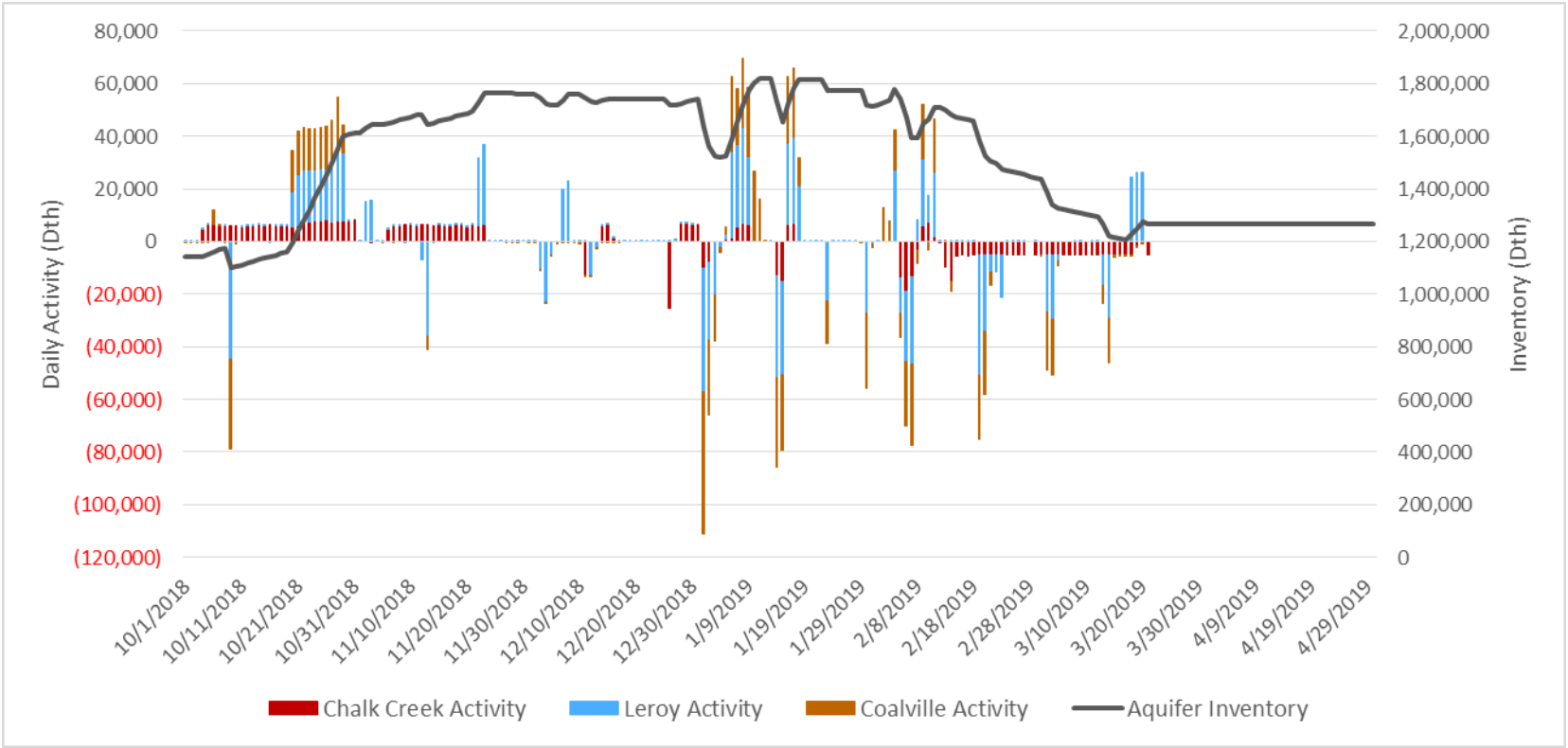
Dominion Energy

Supply vs. Demand



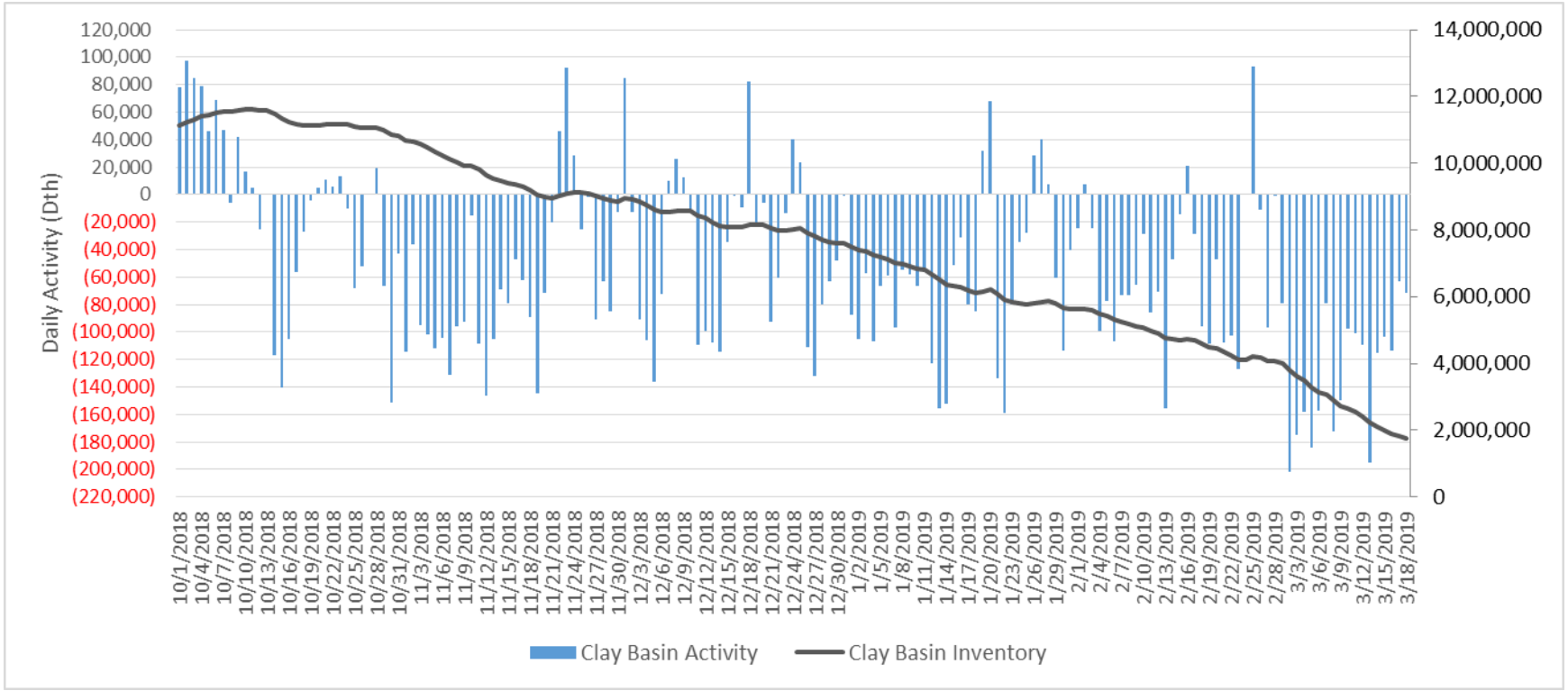
Dominion Energy

Aquifer Daily Usage



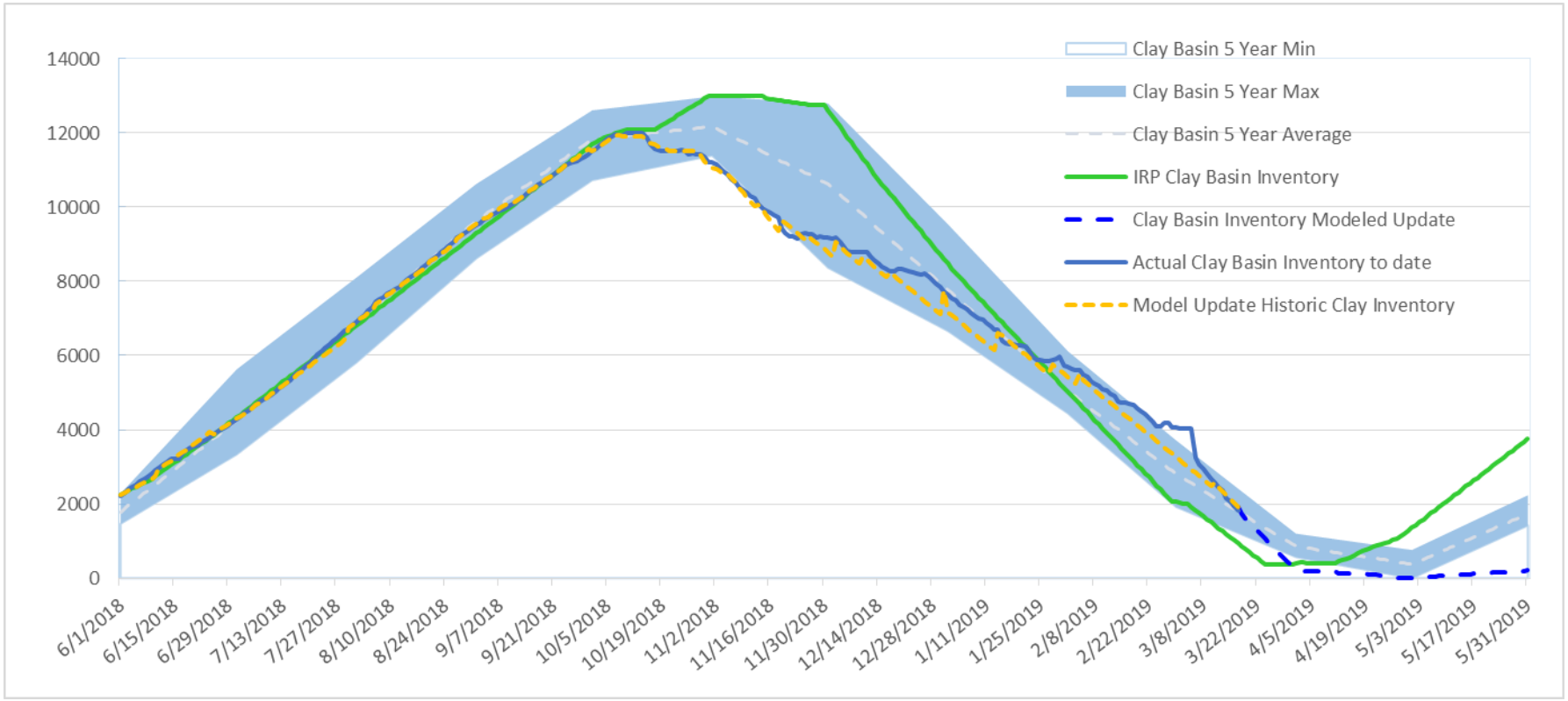
Dominion Energy

Clay Basin Daily Usage



Dominion Energy

Clay Basin Inventory



Dominion Energy

Capacity Releases

- DEU released some of its Kern River capacity
  - Capacity is fully recallable
    - Recalled on cold days when needed
  - Credited over $4 million
  - Releases already contracted for summer 2019
  - May not realize these credits going forward

May-18	$39,341
Jun-18	$0
Jul-18	$1,368,168
Aug-18	$1,190,942
Sep-18	$102,222
Oct-18	$0
Nov-18	$103,247
Dec-18	$531,266
Jan-19	$150,641
Feb-19	$325,665
Mar-19	$269,319
	$4,080,810

Summary

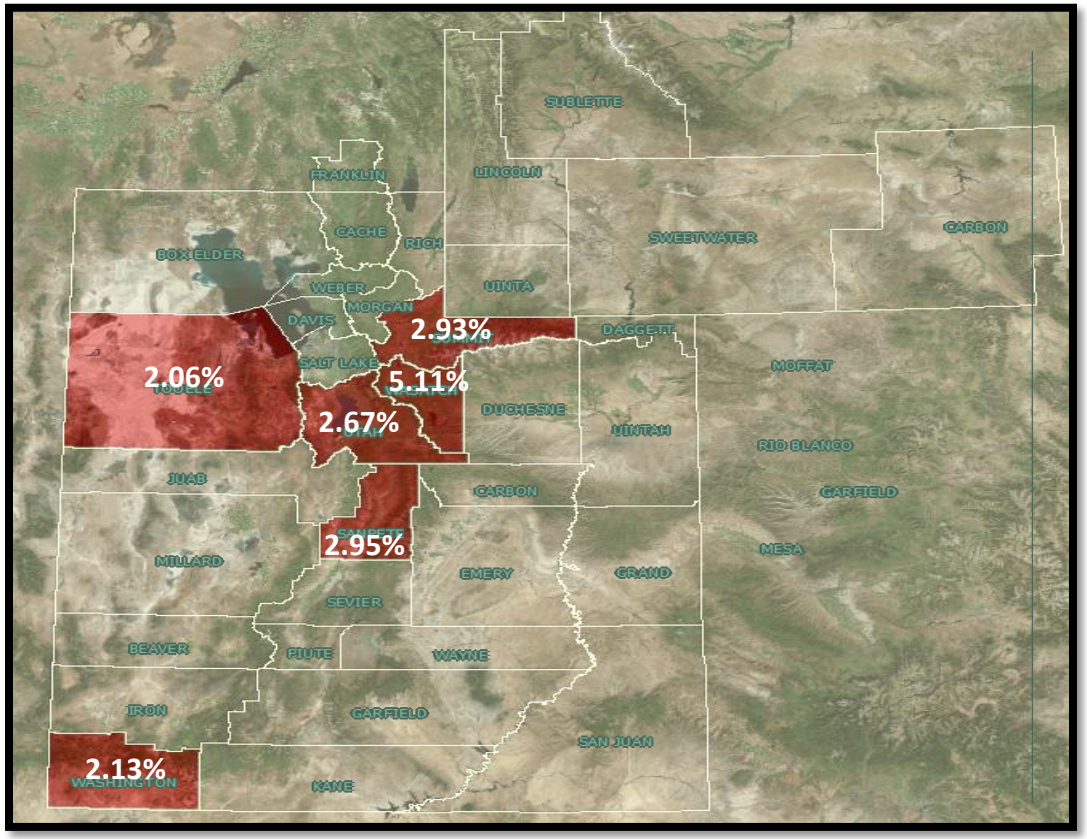
- DEU had several cold periods throughout the winter
  - 5th, 6th, 11th, 12th, 17th highest sendout days
  - DEU had no design-day event this heating season
- DEU fully utilized its storage contracts
- Pricing was high all winter due to impact of the Enbridge pipeline rupture
- DEU released capacity on Kern River in summer and winter (recallable) in order to earn substantial credit to customers
- DEU received more cost-of-service gas than estimated in the IRP

Long-Term System Planning

Dominion Energy®

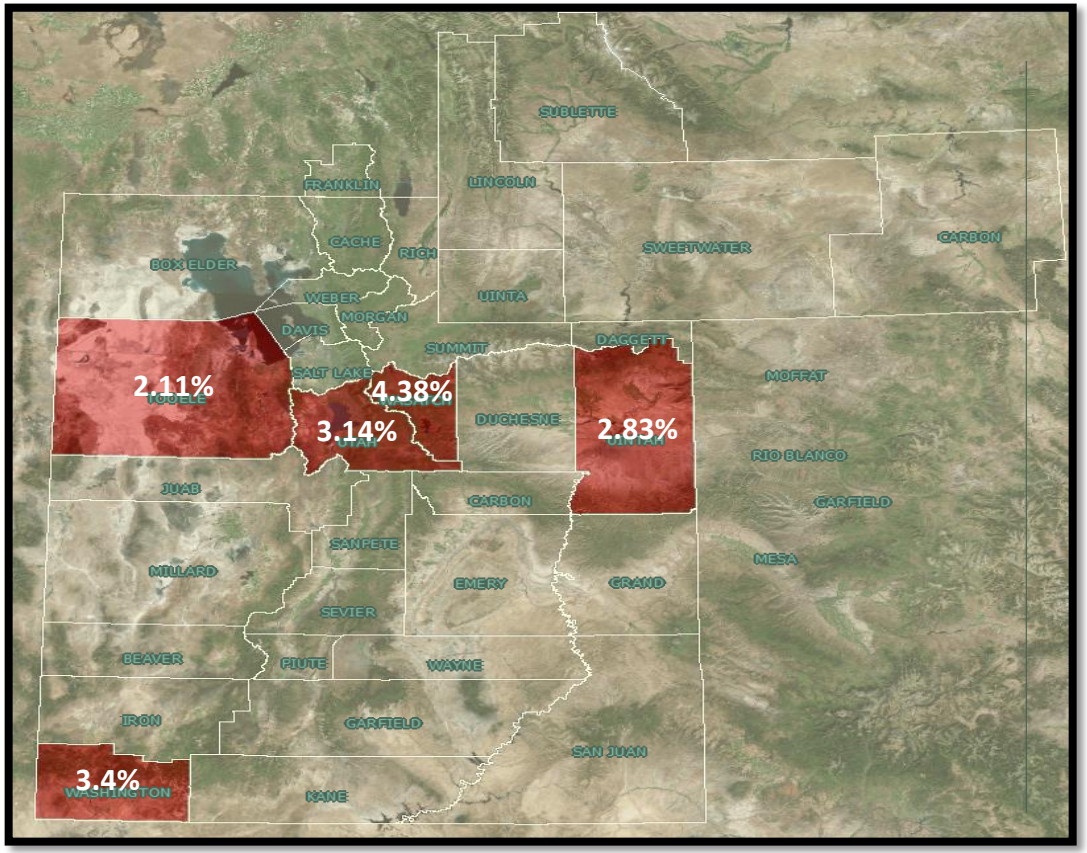
Historic High Demand Growth

- Greater than 2% annual demand growth
- Greater than 5,000 customers
- Average growth 2010-2018



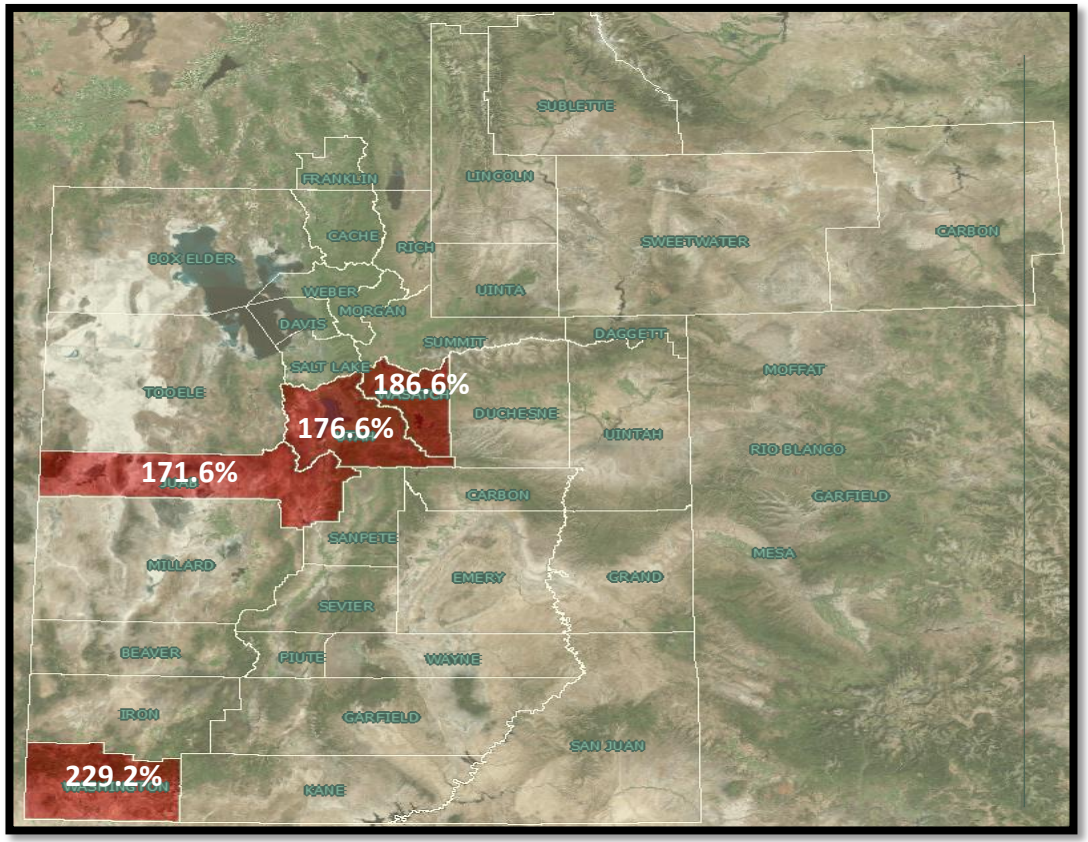
Historic High Customer Growth

- Greater than 2% annual demand growth
- Greater than 5,000 customers
- Average growth 2010-2018



Projected Population Growth Percentage

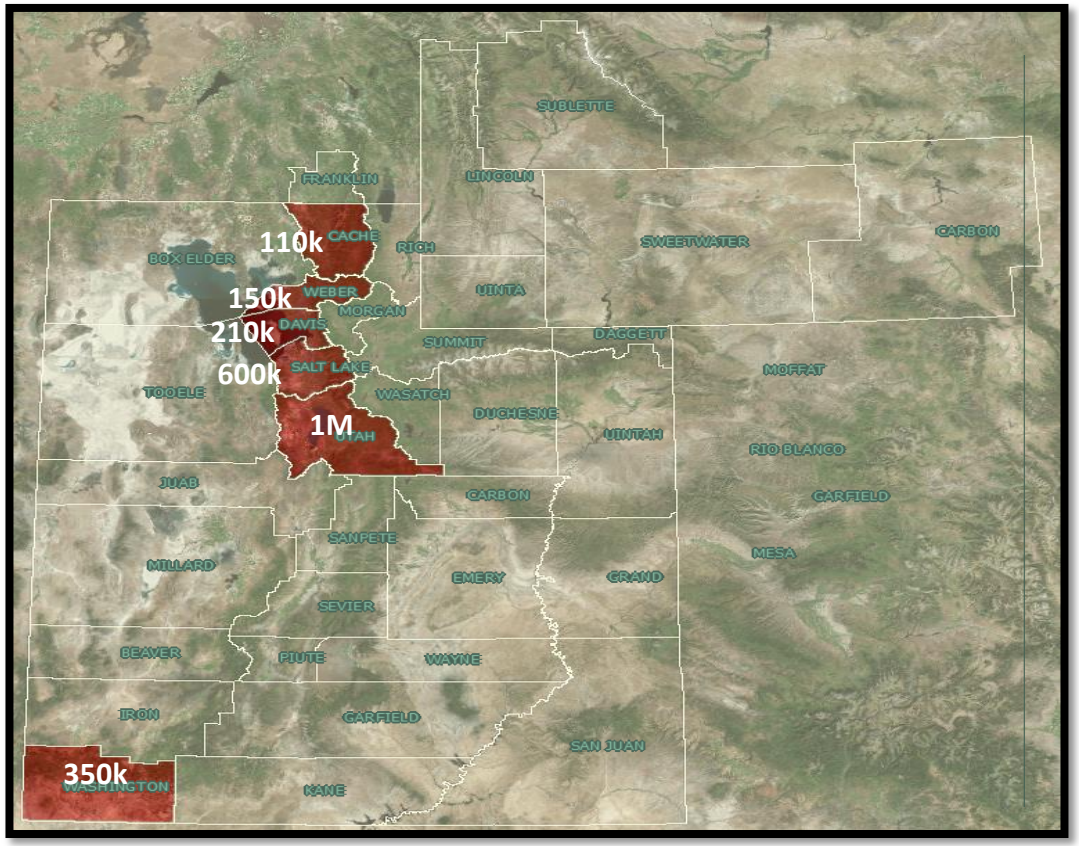
- Kem C. Gardner Policy Institute population change
- Top four counties with 50 year percent increases shown



Kem C. Gardner Policy Institute 2015-2065 State and County Projections P. 21

Projected Population Growth Absolute

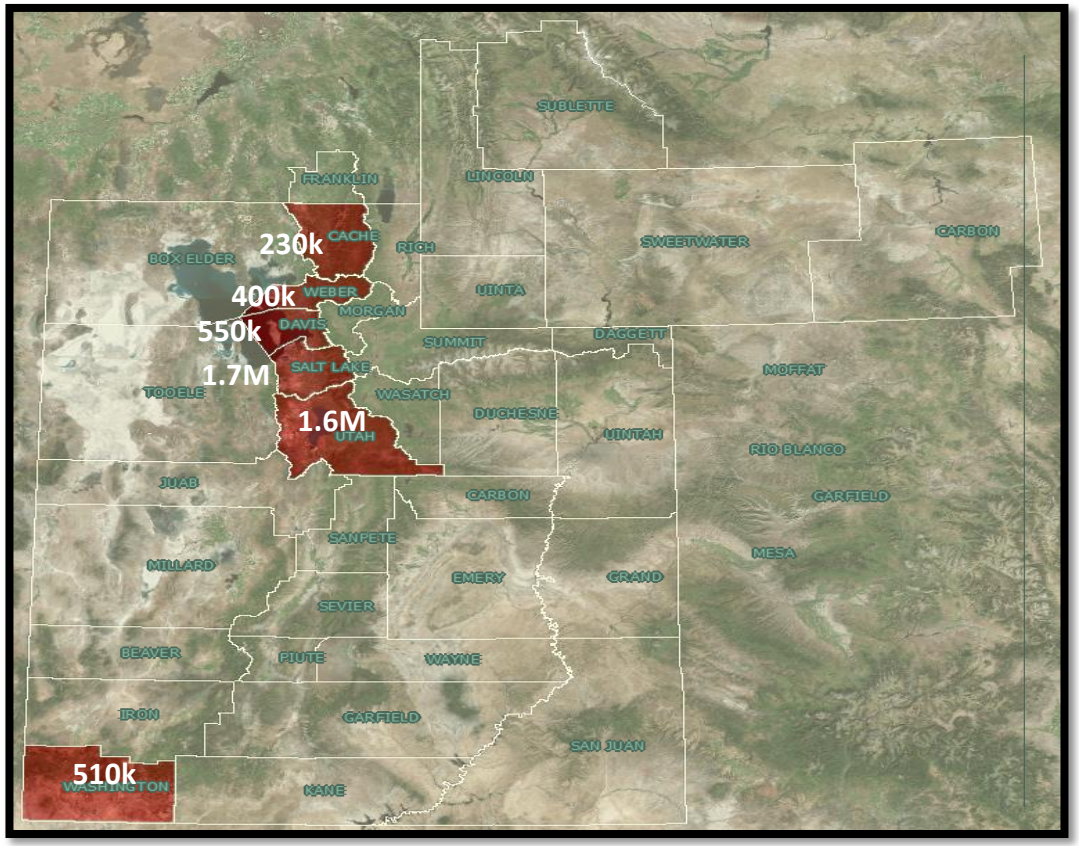
- Kem C. Gardner Policy Institute population change
- Top 6 counties with 50 year absolute population increases shown



Kem C. Gardner Policy Institute 2015-2065 State and County Projections P. 20

Projected 2065 Population

- Kem C. Gardner Policy Institute population change
- Utah's most populous counties of 2065



Kem C. Gardner Policy Institute 2015-2065 State and County Projections P. 20

Identified Growth Support Projects

- Salt Lake and Davis Counties
  - Rose Park Gate Station — 2019 - 2022
- Summit and Wasatch Counties
  - Increase capacity at Jeremy Ranch and Rockport — 2022 - 2024
- Uintah County
  - 6-inch Tie from Vernal 1 to Vernal 7 — 2022 - 2032
- Utah County
  - Five tap lines to serve growth — 2020 - 2025
- Washington County
  - 12-inch Tie from Bluff St. to Washington City — 2020 - 2025
  - 20-inch Loop from Central to Bluff St. — 2021 - 2031
  - Increase capacity at Indianola — 2020 - 2025

Dominion Energy

Executed Growth Support Projects

- San Juan
  - FL98 Uprate to Monticello
- Summit and Wasatch Area
  - FL99 Extension to Heber
  - FL99 Extension to Park City
  - Promontory Capacity Increase
- Uintah
  - FL89 Replacement
  - Island Park Capacity Increase

Trending Pressures

- Duchesne and Fort Duchesne
  - Ioka Tap
  - FL43 Replacement
- Plain City
  - FL51 Replacement
- West Jordan
  - FL36 Tie and IHP

Gate Station Capacity Issues

Gate Station	Capacity* (MMcfd)	Utilization
RIVERTON	200	100%
MYTON	8	100%
EVANSTON SOUTH	8	100%
DOG VALLEY	6	96%
DALTON CREEK	0.2	96%
CENTRAL - WASHINGTON	48	94%
ROCKPORT	16	92%
COMO SPRINGS	1	92%
HUNTER PARK	400	92%
ROCK SPRINGS (KANDA)	17	89%
MORGAN	2	89%
MILFORD (BEAVER)	5	88%
JEREMY RANCH	26	87%
LAKE SIDE KERN RIVER TAP	151	85%
INDIANOLA	31	81%
GRANGER	0.2	80%
PAYSON (MAP 332)	108	79%
PAYSON (MAP 164)	224	79%
ISLAND PARK	10	79%
MOUNTAIN DELL GOLF	0.1	77%
HUNTINGTON BV	2	76%
FILLMORE	4	76%
BOUNTIFUL	4	76%
STODDARD GATE	0.5	76%
GREEN RIVER BORDER	8	75%
HENEFER	2	75%
LITTLE MOUNTAIN (FL 21)	250	75%
BLUEBELL	9	74%
SUNSET	98	73%
NAUGHTON (KEMMERER)	4	72%
HOLDEN	0.3	72%
MOUNTAIN GREEN	10	71%
FERRON	1	70%

** - Capacities shown are approximate*

Dominion Energy®

Supply Reliability

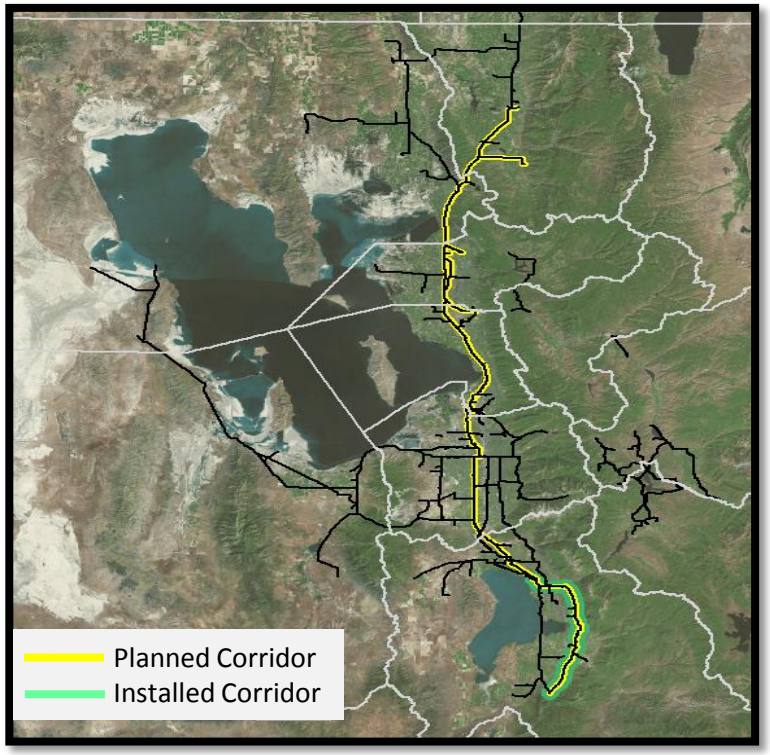
- Probability - once every 14 years weather conditions will result in supply shortfalls due to cold weather causing wellhead freeze-offs
  - Other potential causes that increase probability of occurrence include: Processing plant interruptions, Power failures, Human error, Third-party line damage, Landslides, Earthquakes, Line integrity issues and outages, Cyber-attacks, and Flooding
- Consequence – as many as 650,000 customers could experience loss of service

Sustainable Natural Gas

- Potential Bio-Methane Plants
  - Central Valley
  - Milford
  - Washington
  - Dayton, Idaho

High Pressure Corridor Long Term Plan

- 720 psig MAOP corridor from Payson to Hyrum



Dominion Energy

Uncertainty in Long Term Planning

- Challenge
  - Plan your budget 20 years from now
    - What factors are unknown?

Normal Heating Degree Days Update

Dominion Energy®

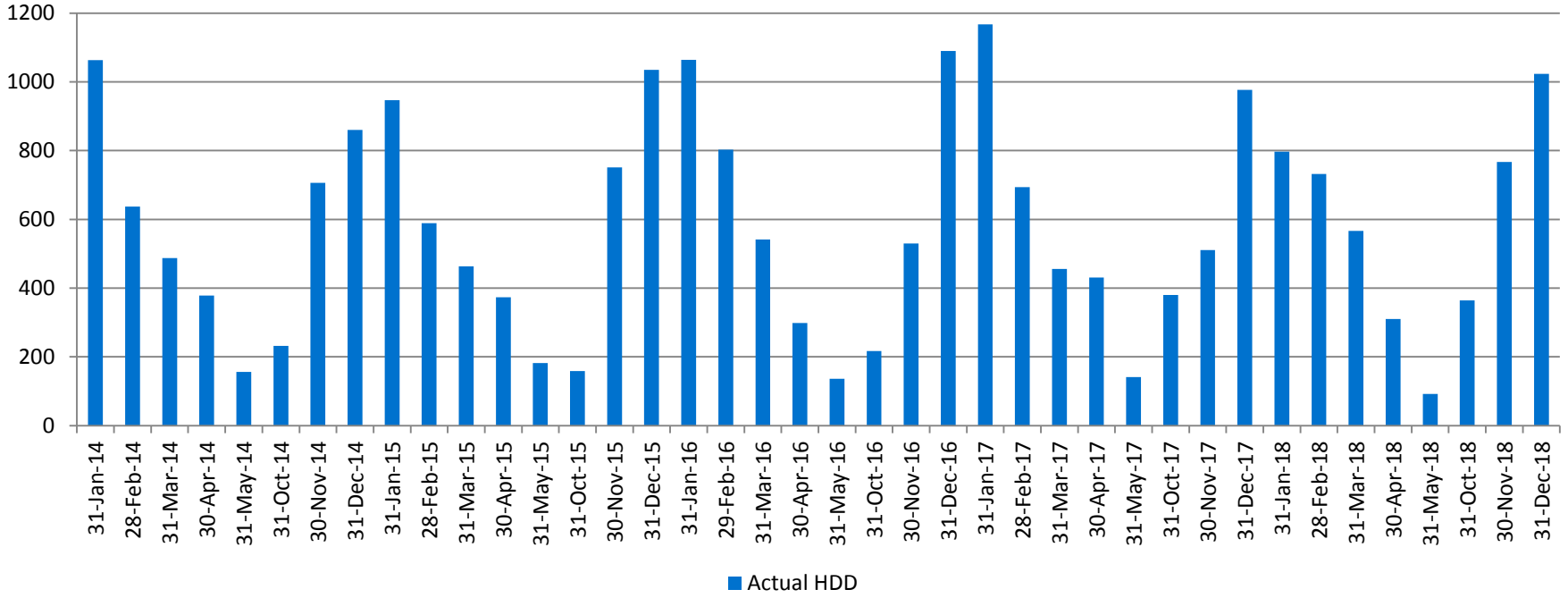
Heating Degree Days - defined

- Difference between 65°F and the daily mean temperature
- Positive difference is heating degree days
- Negative difference is defaulted to zero

Purpose and Goals

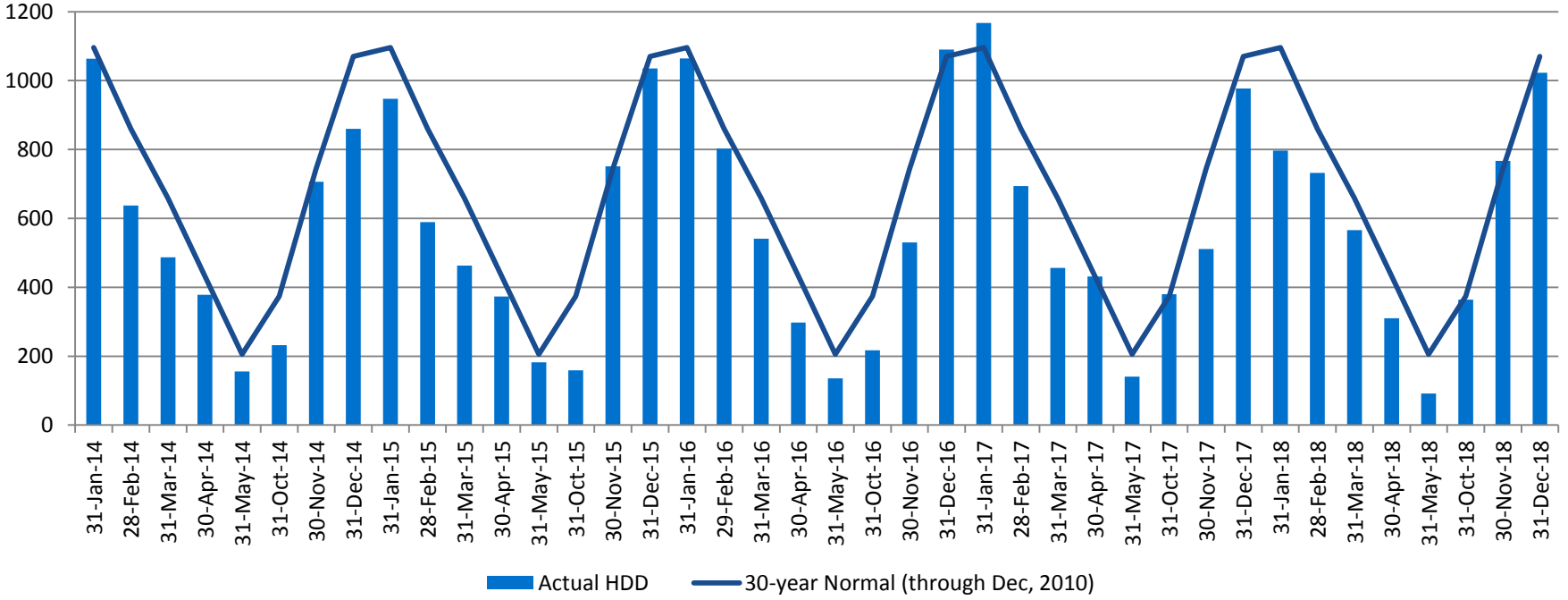
- Adjust General Service (GS) customer usage to normal-temperature baseline (weather normalization)
- Establish baseline that does not result in frequent high-magnitude adjustments
- Baseline should be stable year to year but reflect current trends
- 10-year timeline is too volatile
- 20-year timeline is more stable and better reflects recent history

Actual Heating Degree Days 2014 - 2018



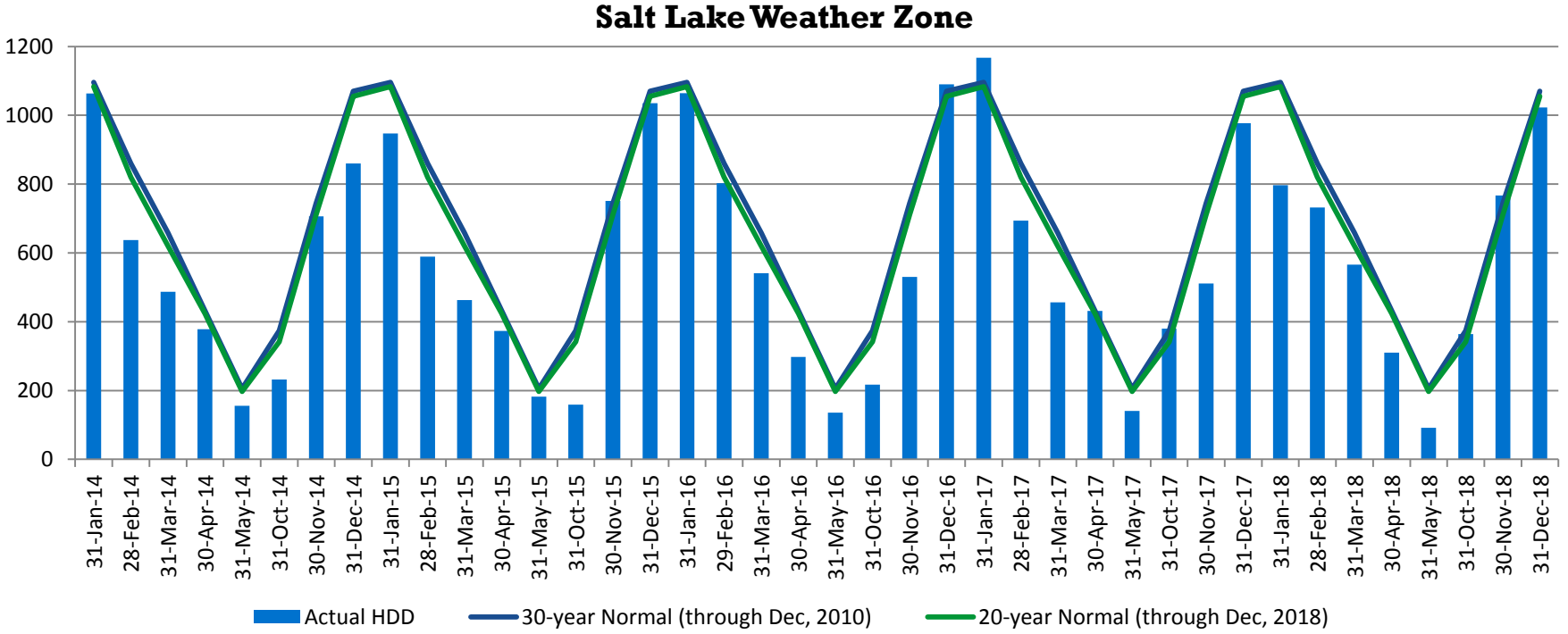
Dominion Energy®

Actual Heating Degree Days 2014 - 2018



Dominion Energy®

Actual Heating Degree Days 2014 – 2018



Dominion Energy

Comparison of Monthly Normal HDD

Salt Lake Weather Zone

MONTH	NEW NORMAL HDD	CURRENT NORMAL HDD	DIFFERENCE
JAN	1,083	1,096	-13
FEB	820	860	-40
MAR	620	658	-37
APR	424	432	-8
MAY	197	205	-9
JUN	38	46	-9
JUL	0	2	-2
AUG	2	2	0
SEP	61	80	-18
OCT	342	374	-32
NOV	712	744	-33
DEC	1,055	1,070	-16
TOTAL	**5,353**	**5,570**	**-217**

Normalization with 20-year normal HDD

YEAR	MONTH	GS USAGE AT CURRENT 30-YEAR NORMAL HDD	GS USAGE AT NEW 20-YEAR NORMAL HDD	DIFFERENCE
2018	JAN	21,070,725	20,936,250	-134,475
2018	FEB	19,036,560	18,459,274	-577,286
2018	MAR	13,799,530	13,564,789	-234,741
2018	APR	11,813,453	11,387,837	-425,617
2018	MAY	6,726,900	6,808,184	81,284
2018	JUN	4,337,810	4,232,231	-105,580
2018	JUL	2,412,530	2,280,388	-132,143
2018	AUG	2,125,536	2,105,850	-19,686
2018	SEP	2,637,057	2,397,051	-240,007
2018	OCT	3,867,753	3,663,528	-204,225
2018	NOV	8,593,368	8,180,551	-412,817
2018	DEC	14,375,796	14,156,761	-219,034
				-2,624,326

Dominion Energy®

Proposal

- 20-year normal baseline ending December 31, 2018 will be proposed in 2019 general rate case
- Weather normalization on new NHDD effective March 1, 2020
- IRP sales forecast still based on current 30-year normal period

Rural Expansion

Legislation Summary

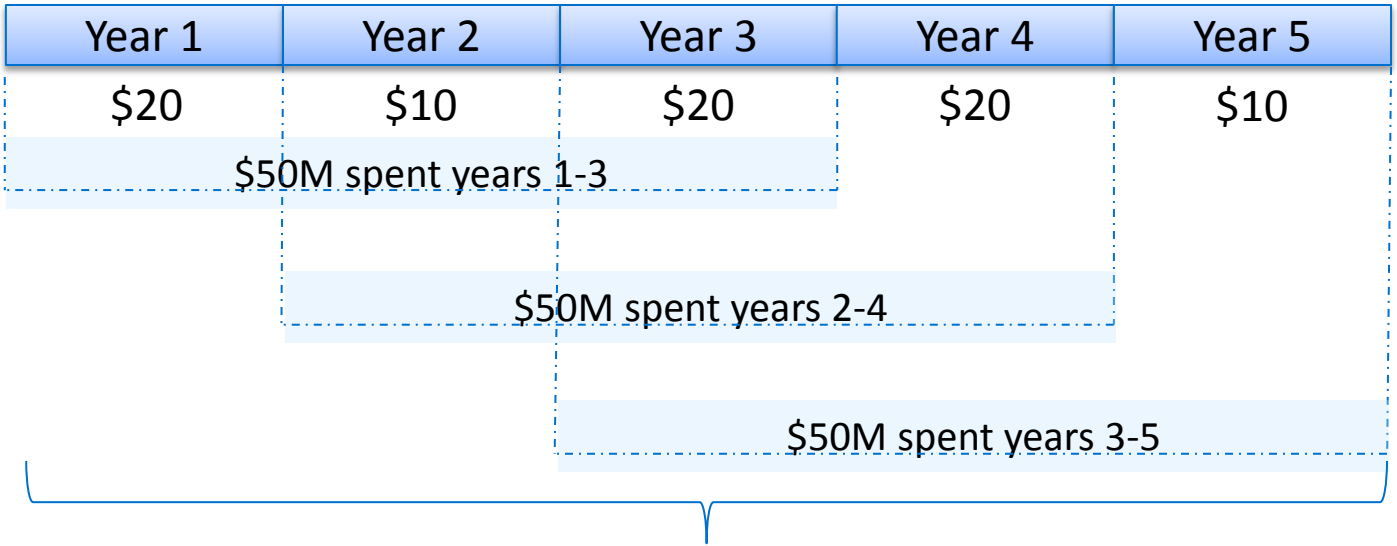
- "In a decision relating to a request for approval of rural gas infrastructure development, the Commission may determine that spreading all or a portion of the costs of the rural gas infrastructure development to the larger customer base is in the public interest."
- "…Commission may approve the inclusion of rural gas infrastructure development costs within the gas corporation's base rates if:
  - Inclusion of those costs will not increase the base distribution non-gas revenue requirement by more than 2% in any three-year period
  - The distribution non-gas revenue requirement increase related to the infrastructure development costs under Subsection (1)(c)(i) does not exceed 5% in the aggregate; and
  - The applicable distribution non-gas revenue requirement is the annual revenue requirement determined in the gas corporation's most recent rate case."

$50 million

$125 million

Dominion Energy

Rural Utah Expansion Allowed Spend Example



Total spent years 1-5 = $80 million

Total allowed at current revenue requirement: $125 million

Remaining that may be spent in future years $45 million

Approach -

- Developed questionnaires to be completed by the communities and internally

- Questionnaires sent to –
  - Dugway
  - Eureka
  - Garden City
  - Genola
  - Goshen
  - Green River
  - Kanab
  - Rockville
  - Springdale
  - Virgin

To Date Returns -

- Green River
  - Initial estimate $30 million
    - $27.7 HP / 16 miles of 8” HP
    - $2.3 IHP / ~ 530 services
- Eureka
  - Initial estimate $15.9 million
    - $14.5 HP / 8.6 miles of 6” HP
    - $1.3 IHP / ~360 services
- Kanab
  - Initial estimate $137.6 million
    - $133.1 HP / 70 miles of 12” HP
    - $4.5 IHP / ~2,920 services
    - Most efficient way – go through Arizona
- Rockville / Springdale – Run these two together
  - Initial estimate $38.2 million
    - $35.2 HP / 20 miles of 8” HP
    - $3 IHP / ~470 services

Next Steps -

Evaluate all sites based on –

- Estimated cost
- Potential new customers
- Impact on current operations
- Impact on current system

Reduce list to top three

Canvas areas to fine tune assumptions

Gain final internal approval to move forward

File with the PSC for expansion by end of 2019

Begin expansion in 2020

Rate Case Preview

Rate Case Preview

- Last full rate case July 1, 2013
    - Commission-ordered follow-up

2013 Rate Case Follow-Up

Directive from Order in Docket No. 13-057-05	Result
Study main and service extension policy	Resolved pursuant to the Order Addressing Pilot Program in Docket No. 13-057-05 issued on June 11, 2015
Evaluate issues related to self-installation of pipelines	Resolved pursuant to the Order Addressing Pilot Program in Docket No. 13-057-05 issued on June 11, 2015
Include depreciation study updates in customers' rates	Resolved in Docket 13-057-19, in the Matter of the Application of Questar Gas Company for Authority to Change its Depreciation Rates
Study IS and TS issues such as meter aggregation and FS load factor in interim workgroups	Workgroups met four times between June 2014 and January 2015, but didn't come to an agreement
Provide revenue neutral percentage changes for each rate schedule based upon the Company's cost-of-service study in the next general rate case	Will be filed in testimony
Provide specific reports related to the Infrastructure Tracker	Master lists, replacement schedules, budgets, etc. are being filed annually
Explore potential changes to interruption of transportation customers and other issues related to transportation service	Since 2013, parties have worked through nomination processes (Docket No. 14-057-19), workgroups resulting in trying to charge TS customers for SNG costs (Docket No. 14-057-31), implementation of TIC (Docket No. 15-057-T06), and overhaul of section 5 of Tariff (Docket No. 18-057-T04).

Timeline of 2019 General Rate Case

File Rate Case
July 1, 2019

Testimony
Estimated
October 2019

Rebuttal Testimony
Estimated
December 2019

Hearing
Estimated
January 2020

New Rates Effective
March 1, 2020

Dominion Energy®

Rate Case Preview

- Last full rate case July 1, 2013
  - Commission-ordered follow-up
- Filing 2019 rate case on July 1, 2019
  - Policy
    - Merger Commitments
    - Infrastructure Tracker
  - Cost of Service/Rate Design
    - Full Cost Rates
    - Admin Fee
    - Optimized Rate Design
    - NGV Rates

Merger Update – 65 Commitments

Commitment	Status
O&M/customer less than $138	✓ $115 as of 6/30/2018
Increase charitable giving by $1million per year	✓ Charitable giving increased from $1.8 to $2.8 million
Maintain capital spending of $200+ million per year	✓
Maintain investment grade credit metrics	✓ A2 Moody's BBB+ S&P
$75 million pension funding from shareholders	✓ Pension funded January 2017

Dominion Energy

Infrastructure Replacement Tracker

Approved in 2009

576 miles of pipe in program

200 miles completed

Propose to Increase Annual Replacement from $70M to $80M

53

Components of Rate Making

Revenue Requirement

- Determines how much money needs to be collected to run the utility and provide a reasonable return
- Total dollar amount

Cost of Service

- Determines how much of the revenue requirement (total pie) should be paid by each class of customers

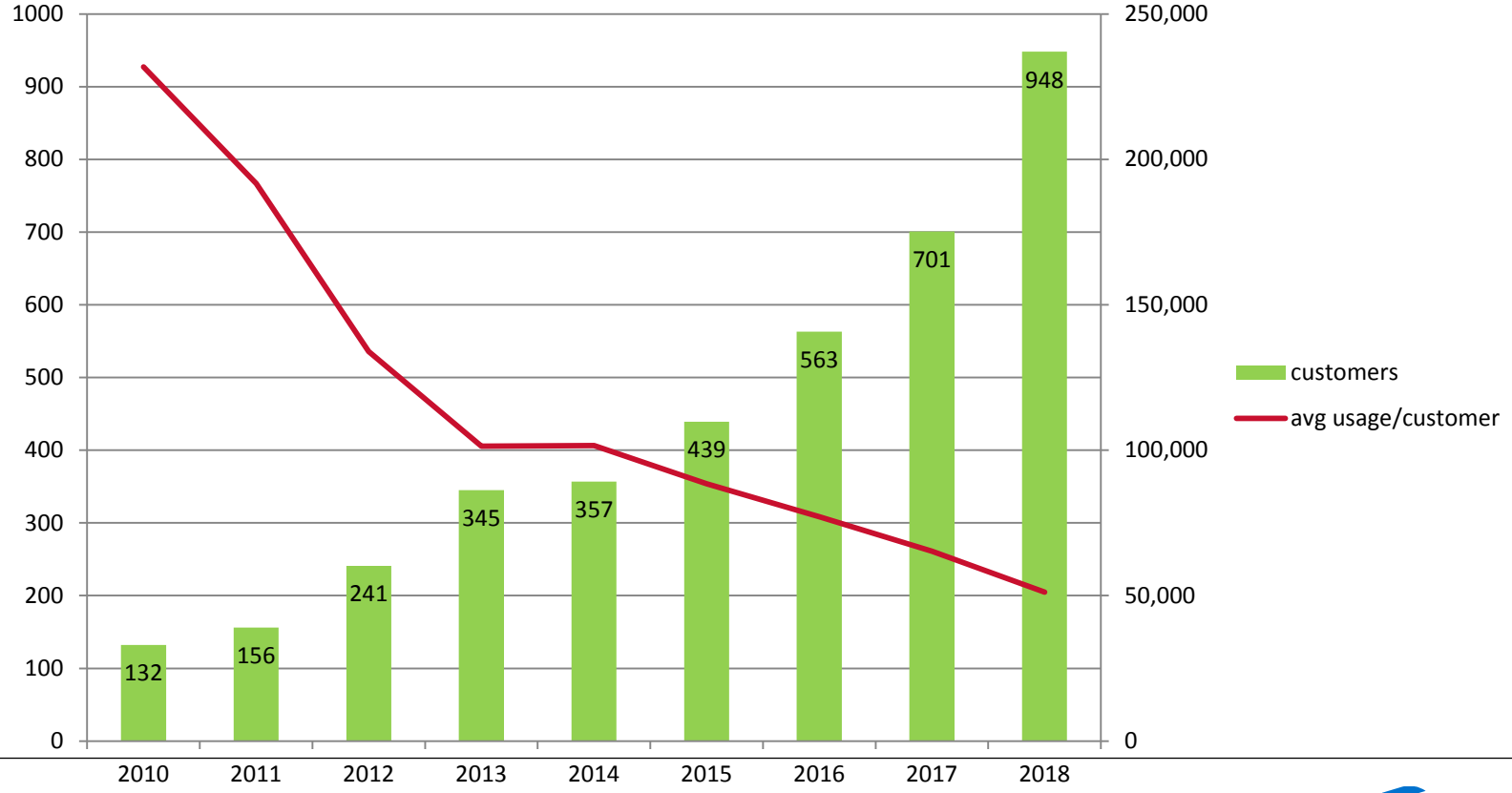
Rate Design

- Determines how class revenue requirement is collected
- Volumetric, fixed, seasonal, etc.

Cost of Service – Proposing Full-Cost Rates

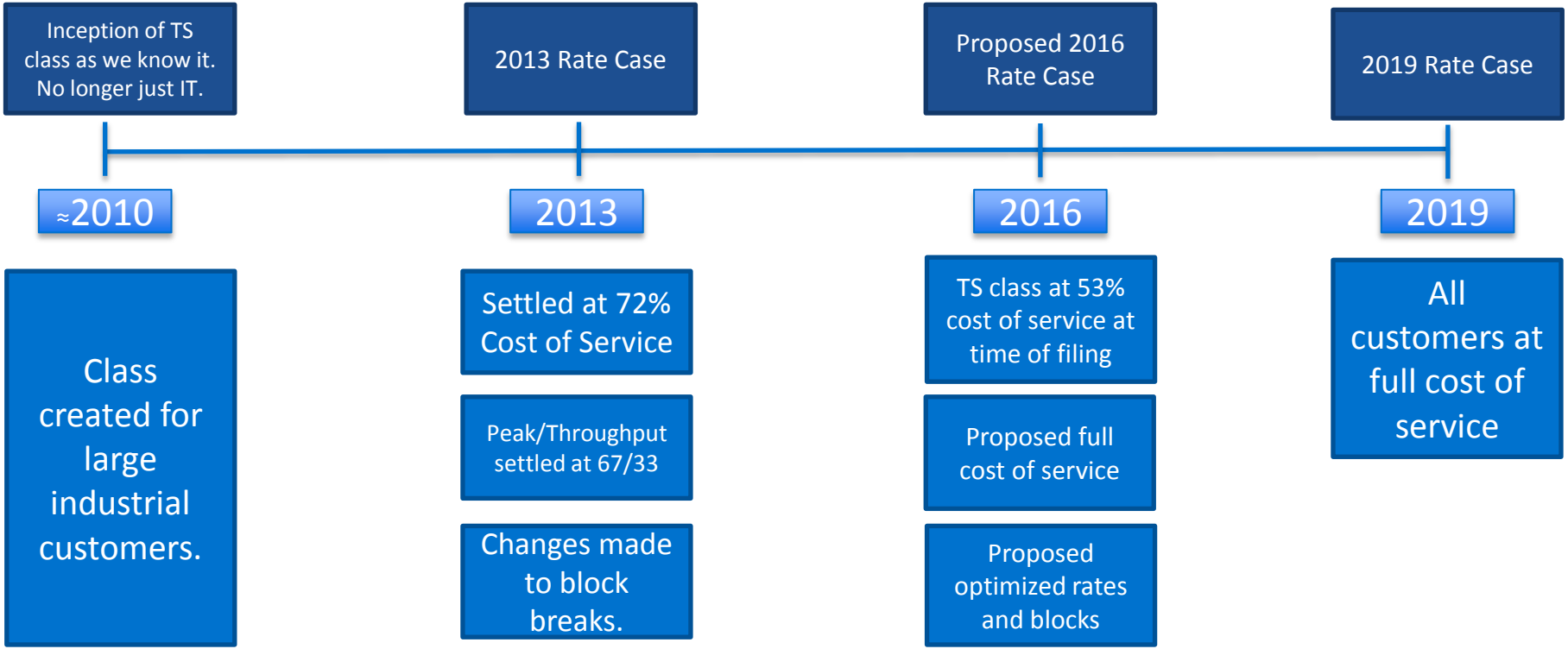
- No change in COS studies
- Everyone needs to pay their share
- Prevent one customer class from subsidizing another (interclass subsidies)
- TS class has been subsidized for decades
- Subsidy gets worse as more small customers switch to transportation
  - Paying a rate that was designed for larger customers
  - Not taking their costs to the new class
- Some TBF customers have switched to TS rates
- We don’t care where they are as long as they pay for costs they’re causing

Historical TS Customer Count



Dominion Energy

Timeline of TS Class



Dominion Energy

TS Rate Design Evolution

Pre-2013 Rate Design	Volumetric Rate	Current Rate Design (2013)	Volumetric Rate	Proposed Rate Design (2016)	Volumetric Rate
Block 1 (First 20,000 Dth)	.21900	Block 1 (First 200 Dth)	.73802	Block 1 (First 400 Dth)	2.21207
Block 2 (Next 80,000 Dth)	.16436	Block 2 (Next 1,800 Dth)	.48026	Block 2 (Next 1,600 Dth)	1.05503
Block 3 (Next 400,000 Dth)	.13158	Block 3 (Next 98,000 Dth)	.19277	Block 3 (Next 48,000 Dth)	.13971
Block 4 (All Over 500,000 Dth)	.05291	Block 4 (All Over 100,000 Dth)	.07312	Block 4 (All Over 50,000 Dth)	.05714

Components of Rate Making

Revenue Requirement

- Determines how much money needs to be collected to run the utility and provide a reasonable return
- Total dollar amount

Cost of Service

- Determines how much of the revenue requirement (total pie) should be paid by each class of customers

Rate Design

- Determines how class revenue requirement is collected
- Volumetric, fixed, seasonal, etc.

Rate Design – Reduce Intraclass Subsidies

- Mix of volumetric rates, basic service fee, demand charge, administrative charge, seasonal rates, etc.

- Regardless of the mix of rates, objective is to collect the full “piece of pie” allocated to a class.

- Rate case will propose new optimized rates
  - Changes in block breaks, number of blocks, etc.
  - Model will flow through from revenue requirement to final rates.

Calculation of Admin Fee based on 2018 data

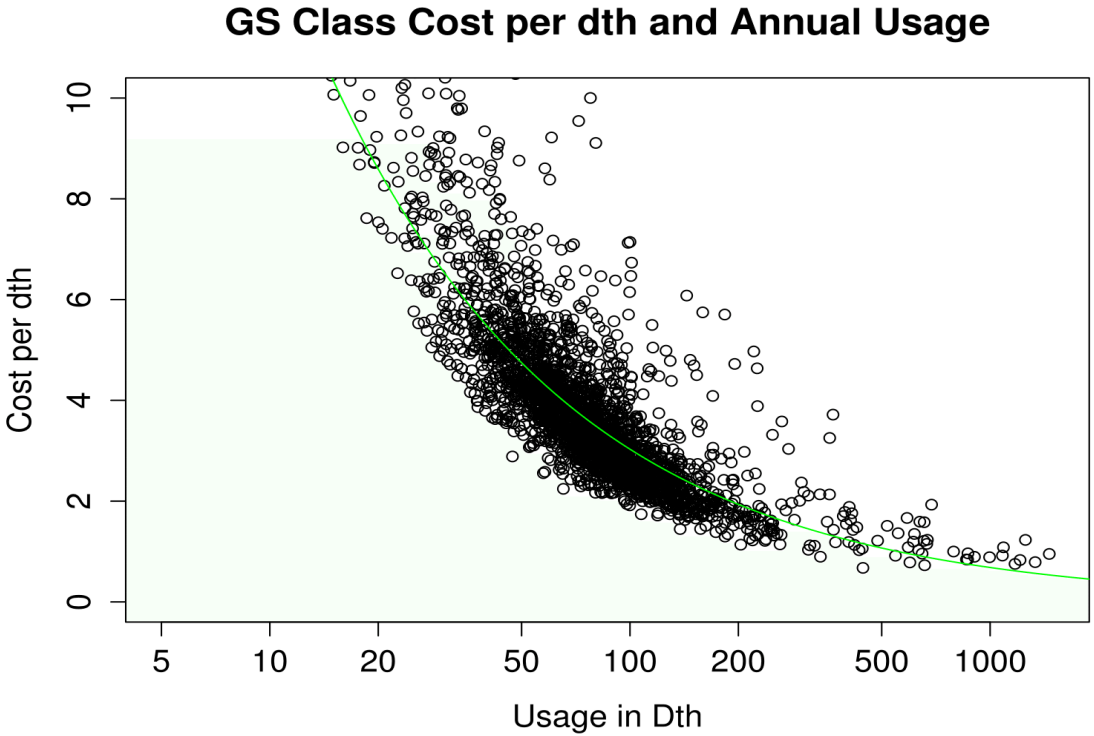
Service Provided	Cost allocated to transportation
Account Management	$988,958
Measurement and Allocation	$733,110
Billing	$128,322
Gas Supply	$813,007
Commercial Support	$302,365
Nominations/Scheduling	$98,597
Total	**$3,064,359**

Primary Customers	Secondary Customers
830	116

Primary Admin Charge	Secondary Admin Charge
$3,450	$1,725

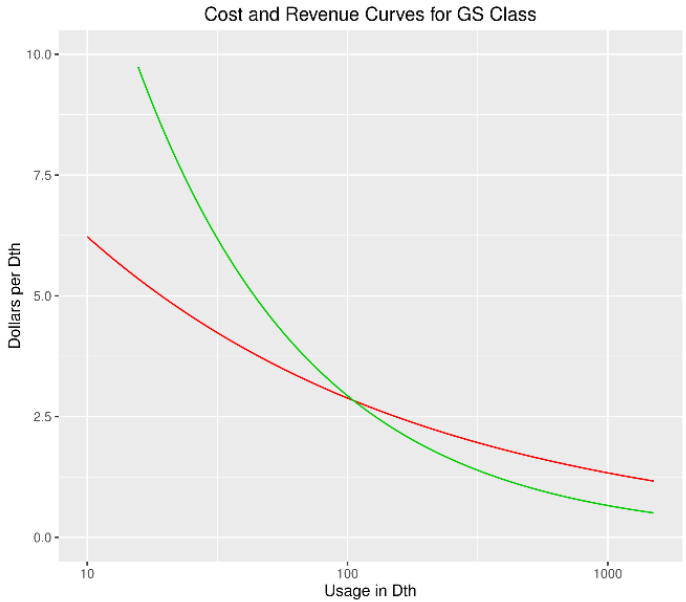
Dominion Energy

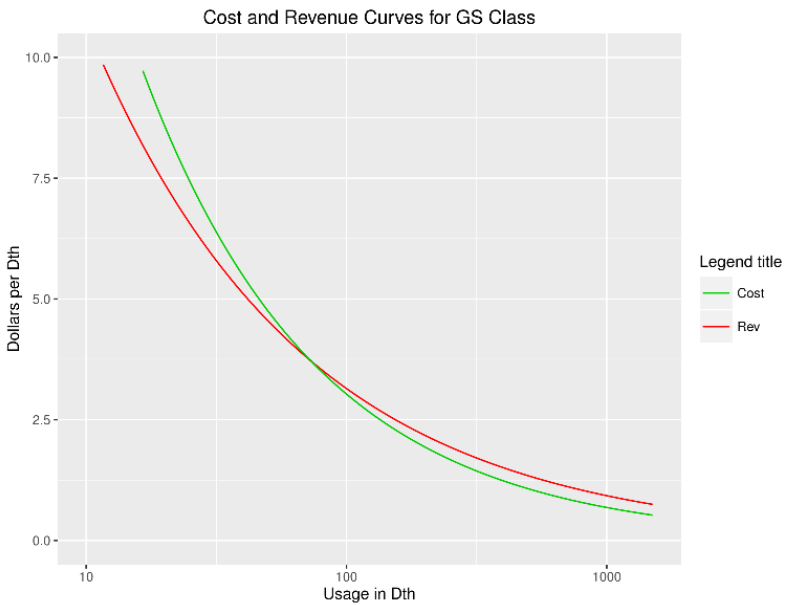
Optimized Rates Reduce Intraclass Subsidies



Dominion Energy

Optimal Rate Design





Dominion Energy

NGV Rate

$$\frac{\text{Revenue Requirement}}{\text{Forecast Volumes}} = \text{DNG Rate}$$

- Last adjusted in 2013
  - Volumes have dropped from 678,836 to 260,503
  - Revenue Requirement still in progress
- Rate will go up – how much?
- Taking steps to increase volumes at the CNG stations
  - RNGT
  - Exploring other options, new ideas

Questions?

Dominion Energy®