



Vector Pipeline™

2000-2020

Vector Pipeline

Business Update Meeting

October 14, 2020



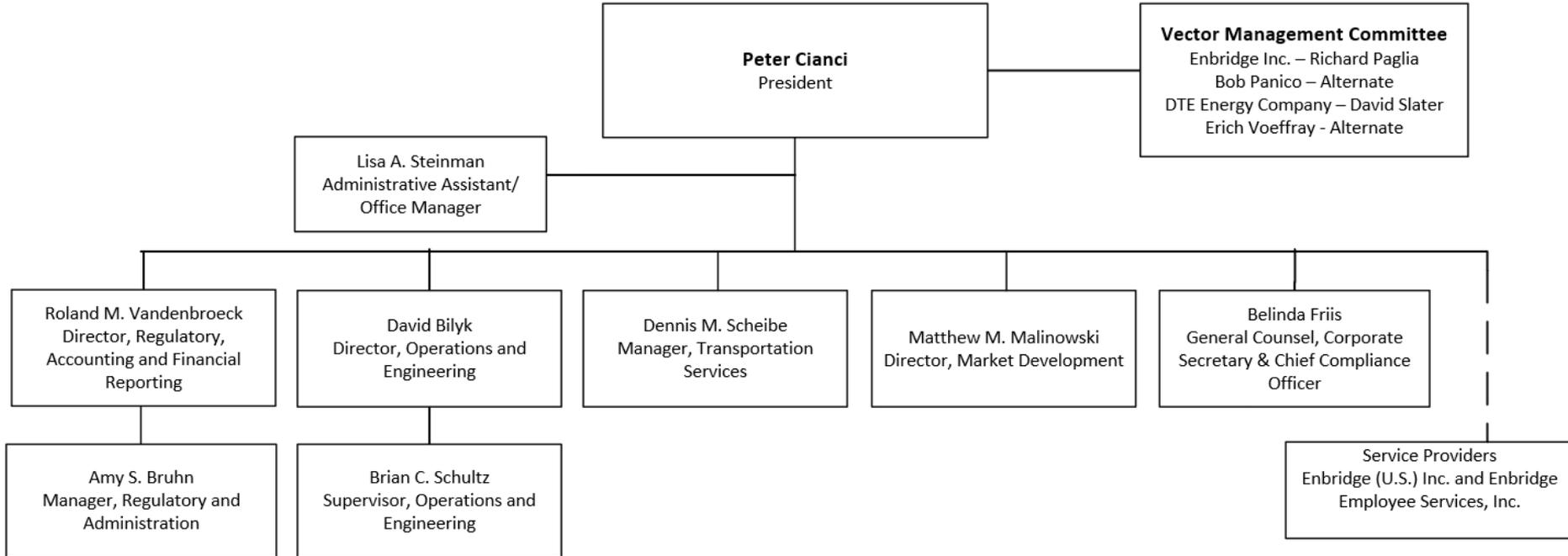
Meeting Agenda

- Pete – Welcome and Introductory Remarks

- Matt
 - Projects
 - Significant Maintenance Recap
 - Operational Statistics
 - Operational Efficiency
 - What's Next for Vector

- Dennis
 - Capacity Postings
 - Contract Path / Secondary Point Reminder
 - QuickNom Enhancement
 - Mastio Survey Results

Organization Chart





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Vector's 20th Anniversary

2000 - 2020



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Significant Milestones

- **December 1, 2000: Vector In-service**
 - New 42” Pipeline connecting Chicago to Dawn
 - One compressor station / seven interconnects
 - About 700 MDth/d annual capacity
- **January 2002: Highland Comp. Station**
 - About 925 MDth/d of annual capacity
 - Bi-directional capability
- **November 2007: Joliet / Washington Comp. Stations**
- **November 2009: Athens Comp. Station**
 - About 1,275 MDth/d of annual capacity
- **2018: Rover & NEXUS interconnected**
 - About 1,745 MDth/d of annual capacity to Dawn



Other Significant Milestones

- Vector will soon have 28 interconnects
- Vector has delivered 8.9 Tcf over the past twenty years
- Delivered 252 Bcf in the first full year (2001). In 2019, delivered 681 Bcf (170% increase).
- Record peak day sendout occurred January 31, 2019 (2,969 MDth)
- Started with 5 customers, we now have 63 active customers.



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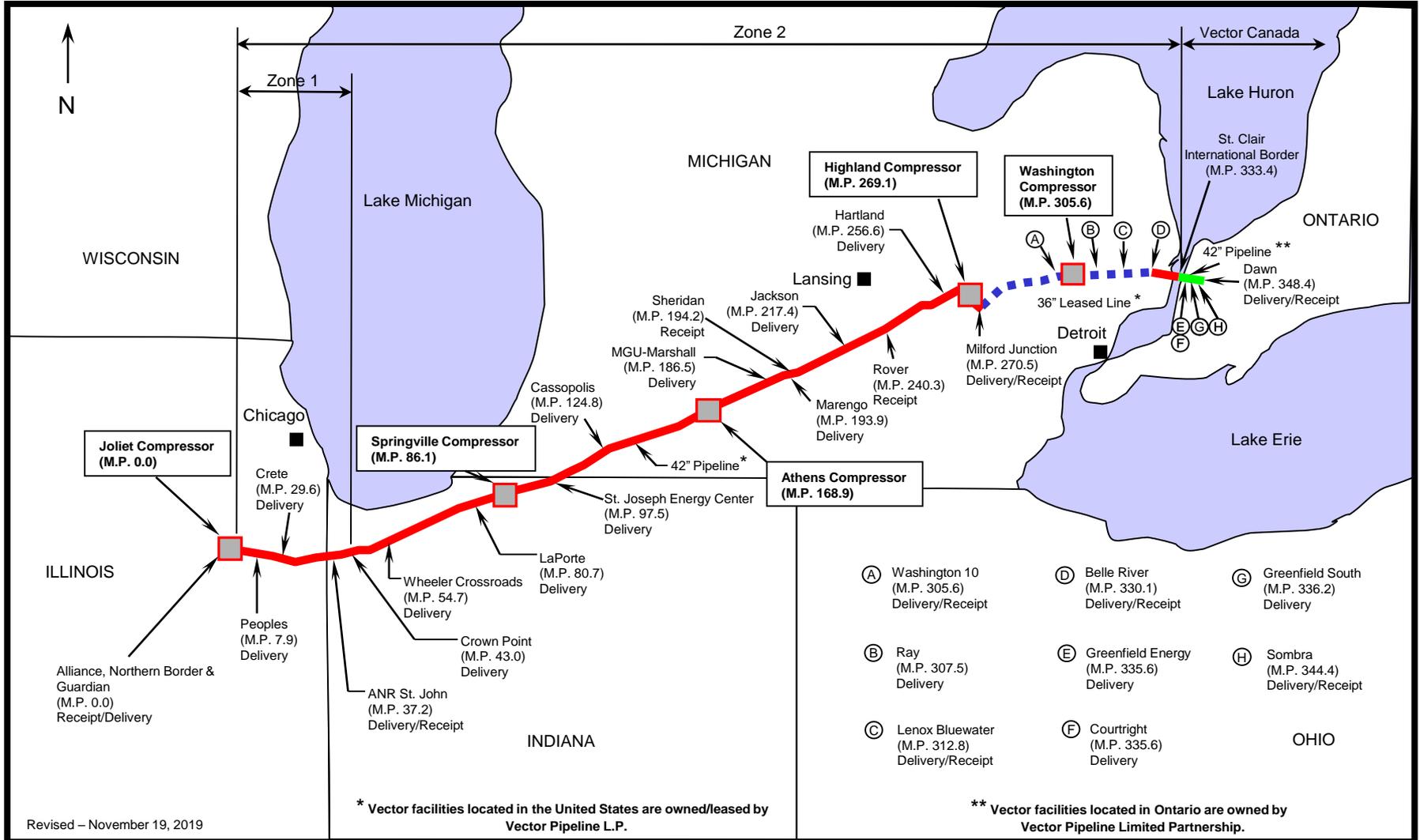
Matt Malinowski

Director, Market Development



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Vector Pipeline System Map



Revised – November 19, 2019



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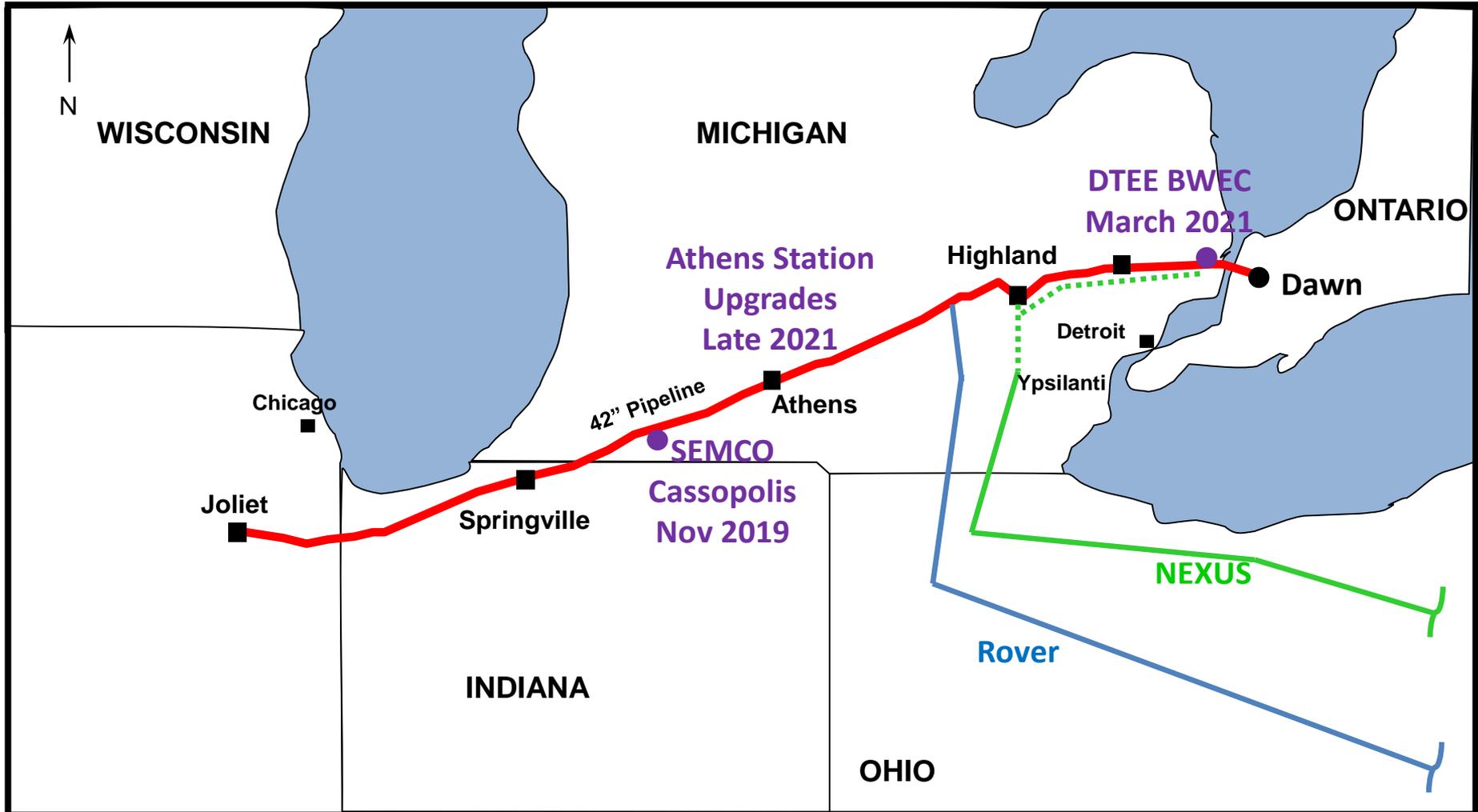
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Projects



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Projects





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SEMCO Interconnection

- SEMCO – Cassopolis Interconnect
 - New delivery near Cassopolis located in Southwest Michigan
 - 12 MDth/d metering capacity
 - In-service November 2019



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DTEE Interconnect

(Under Construction)

- DTE Electric – Bluewater Energy Center (DTEE-BWEC)
 - New 1100 MW powerplant to replace coal
 - Vector constructing two meters and a 1.25 mile lateral near St. Clair, Michigan
 - Receipt meters from Vector 42-inch mainline and DTE Gas
 - 180 MDth/d maximum load
 - Test gas 2021
 - Plant commercial in-service 2022
 - Potential future expansion at this plant



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Athens Station Upgrades

- Install launcher and receiver traps at the station in order to segment a 270 mile pipeline into two smaller, more manageable sections.
 - Reduces risk during future inspection pig runs
 - Reduces impact to certain interconnections during pigging as they will not need to be shut as long
 - Allows for more frequent cleaning pigs, if required



Potential Projects

- Chicago/Northern Indiana Markets
 - Exploring growth within this region
- Continue pursuing additional LDC Interconnects
- New powerplants
- RNG (Renewable Natural Gas)
 - Green projects to capture gas from dairy operations or landfills



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Recap of Major Maintenance



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2020 Inline Inspection (ILI) Runs April and May

- Required every seven years
- Requires several tool runs
 - System divided into three discrete segments
 - Two cleaners and a “smart tool” per segment
- All ILI runs completed by May 12, 2020
- No immediate concerns detected
 - Investigative digs to occur in 2021



Joliet Meter Controls

- Controls systems at the meters with Northern Border and Alliance pipeline interconnections were upgraded in June and July respectively.
- Each upgrade took about a week. No flows were allowed at those interconnections while work was being performed.
- Shippers' receipts were accommodated by allowing alternate receipt points.



Highland Compressor Outage

- Highland Station planned outage – September 7 through September 25 (finished two days early).
- Upgraded the station utility power feed
- Upgraded the control systems for the entire station
- No restrictions to any Firm primary nominations during this outage



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Operational Statistics



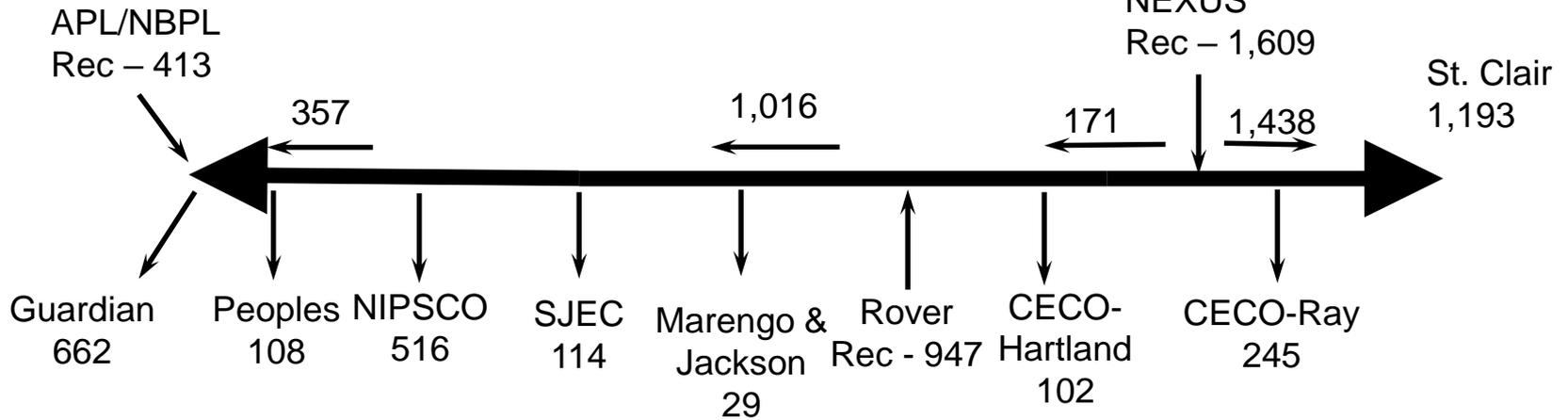
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Winter Peak Day 2018/19

All time high sendout!

Winter 2018/19 System Peak – 2,969 MDth
January 31, 2019

Michigan
Receipts
Wash 10
Bluewater
DTE Gas/
NEXUS
Rec – 1,609

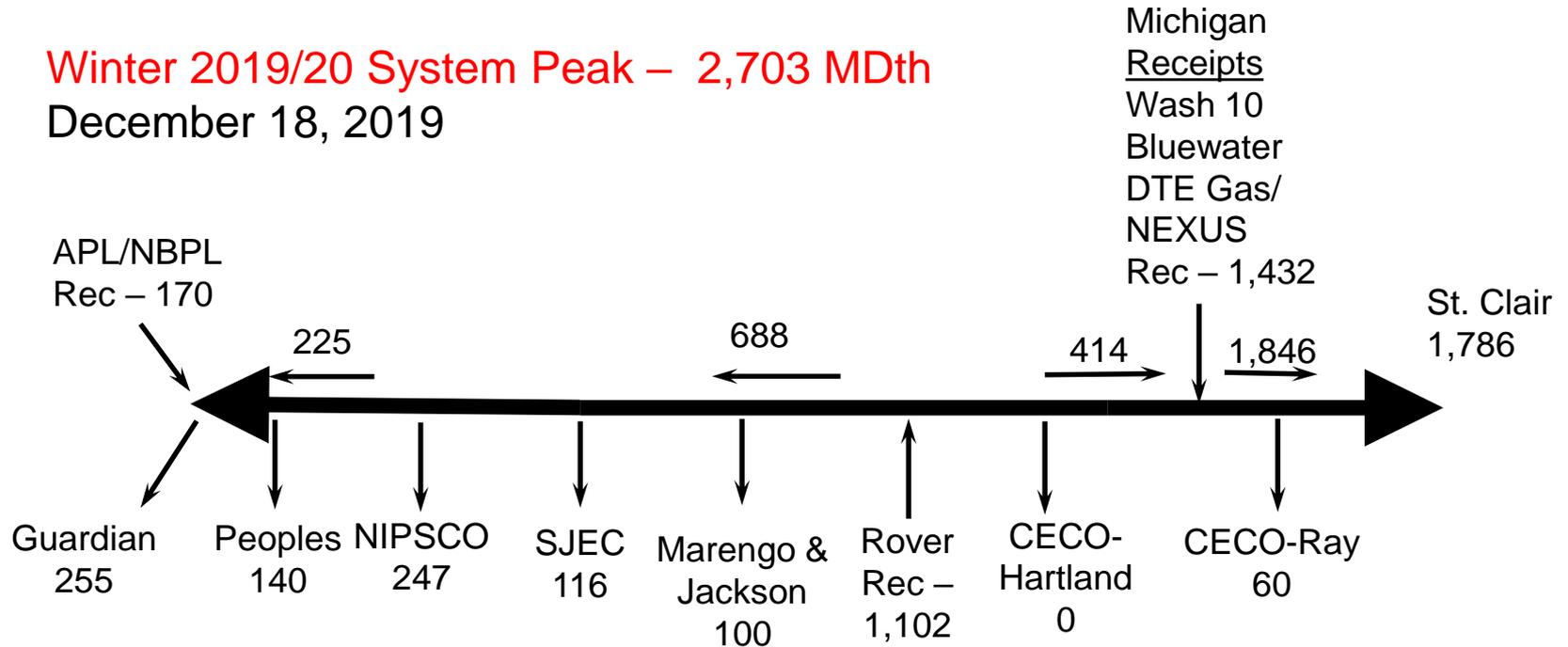


Temperature Range – S.E. Mich. (White Lake): -13°F to -1°F



Winter Peak Day 2019/20

Winter 2019/20 System Peak – 2,703 MDth
December 18, 2019



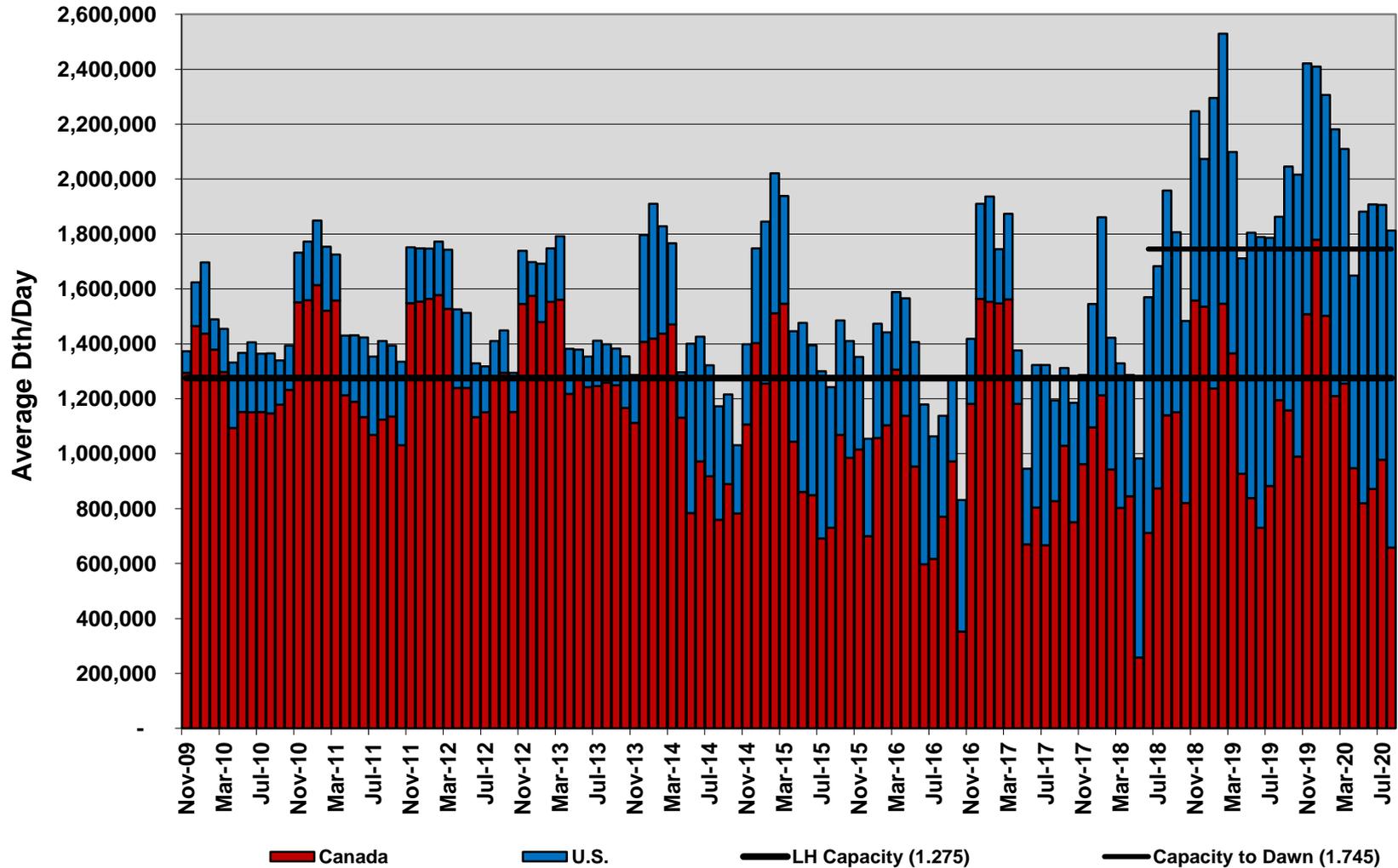
Temperature Range – S.E. Mich. (White Lake): 2°F to 24°F



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Scheduled Deliveries

(Includes Longhaul, Shorthaul, Backhaul, Lease and Segmentation)

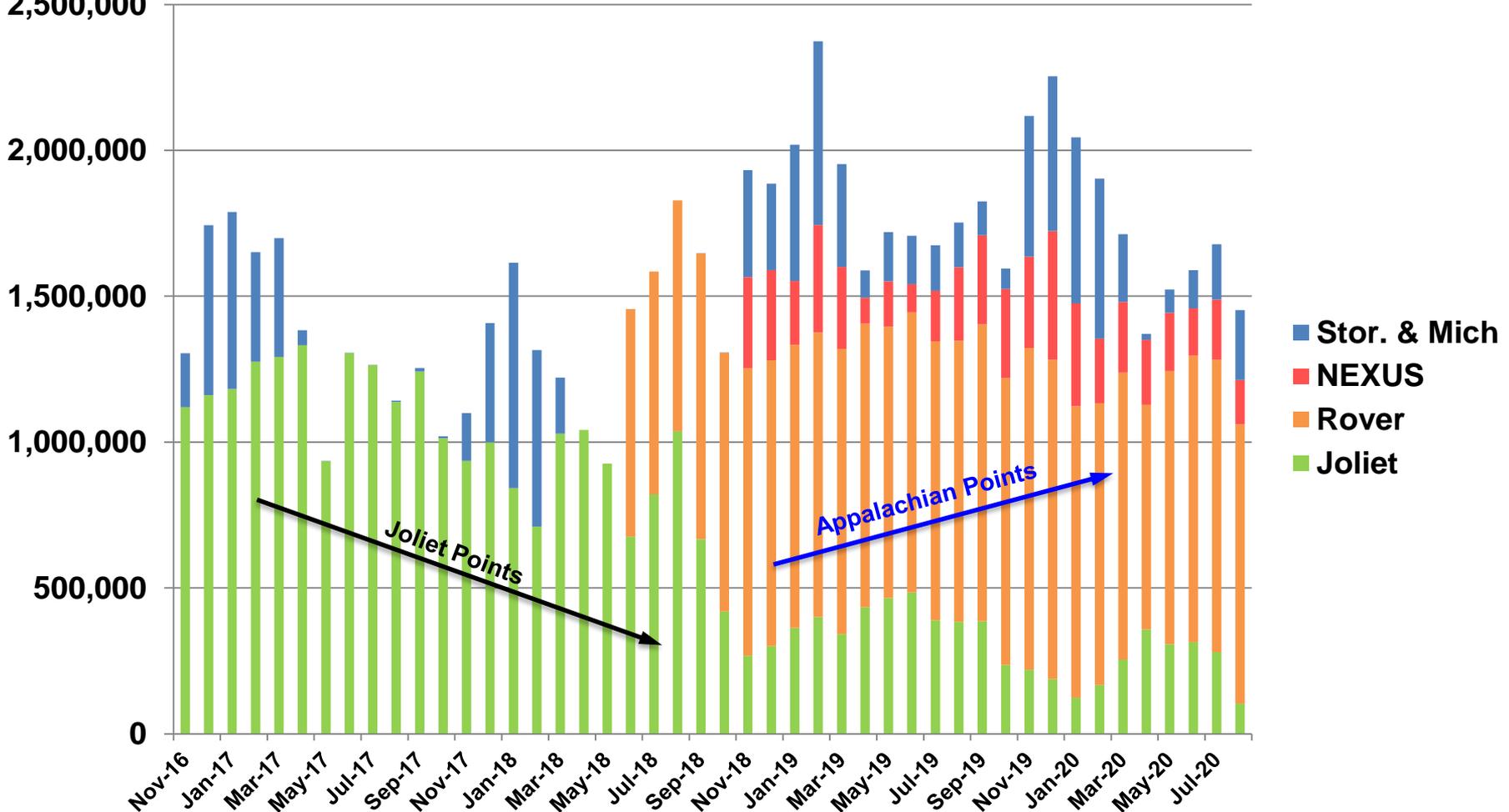




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Receipts from Pipelines and Storage

Dth/d
2,500,000





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Net Deliveries to Michigan LDCs

Dth/d

450,000

400,000

350,000

300,000

250,000

200,000

150,000

100,000

50,000

0

■ DTE Gas
■ Consumers
■ MGU
■ SEMCO



Note:

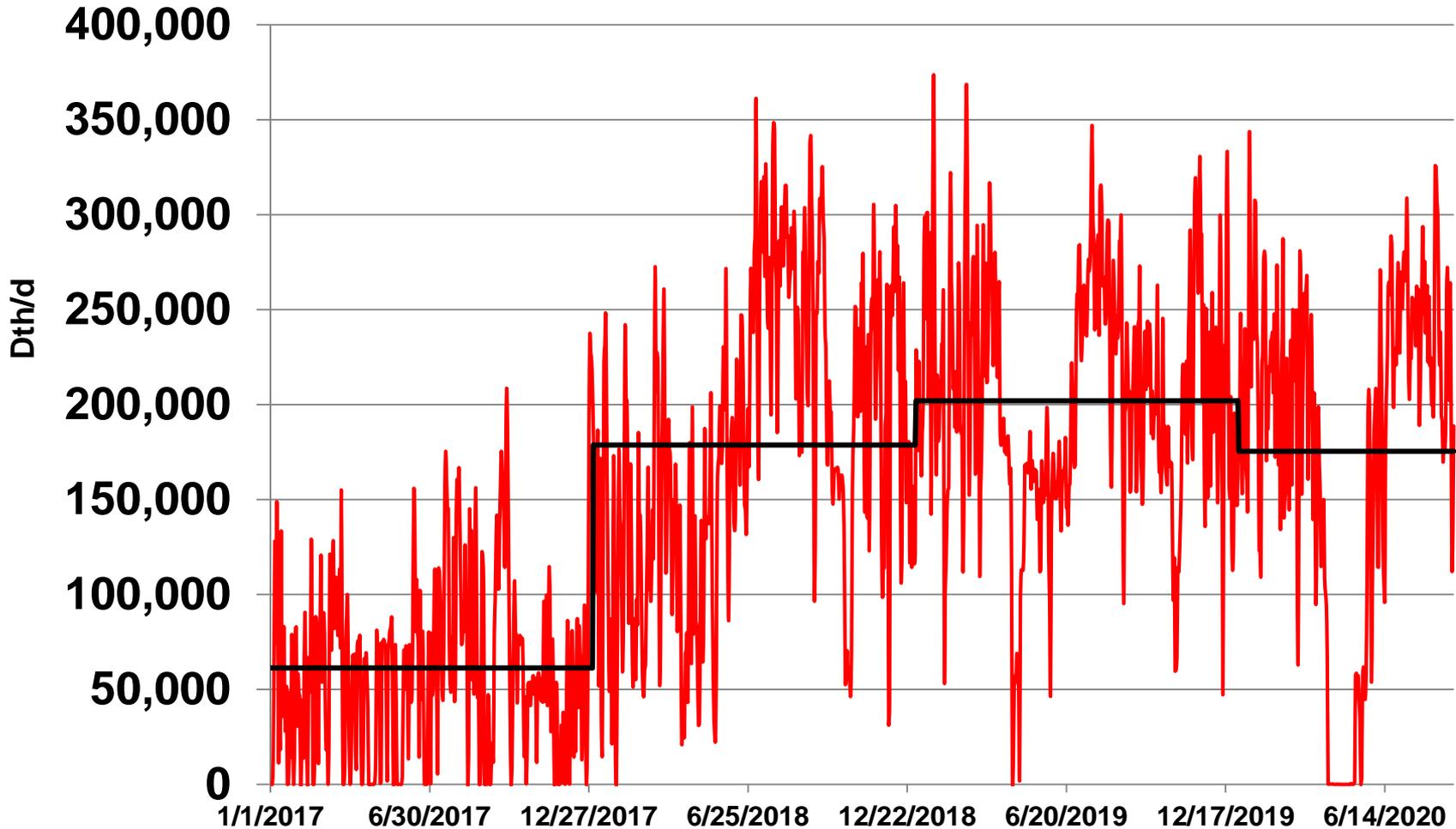
- 1) DTE Gas deliveries being netted off by NEXUS Receipts at both Milford Junction and Belle River
- 2) Vector delivers into Consumers almost completely as secondary nominations



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Deliveries to US and Canadian Power Plants

(with Annual Average)





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Historical BTU Content

(Btu/cf @ St. Clair)

<u>Year</u>	<u>Btu/cf</u>
2012	1026
2013	1035
2014	1045
2015	1054
2016	1054
2017	1051
2018	1065
2019	1070
YTD	1072



BTU Issues

- Vector's Tariff has a maximum BTU of 1100 BTU per standard cubic foot
- As BTU's continue to climb, Vector needs to monitor all receipts for out-of-spec gas
- Certain interconnecting supply pipelines have higher BTU limits (or no limit)
- Reduced throughput on the west end of the pipeline may result in certain supply points being shut in by Vector from time to time if Vector cannot blend gas down



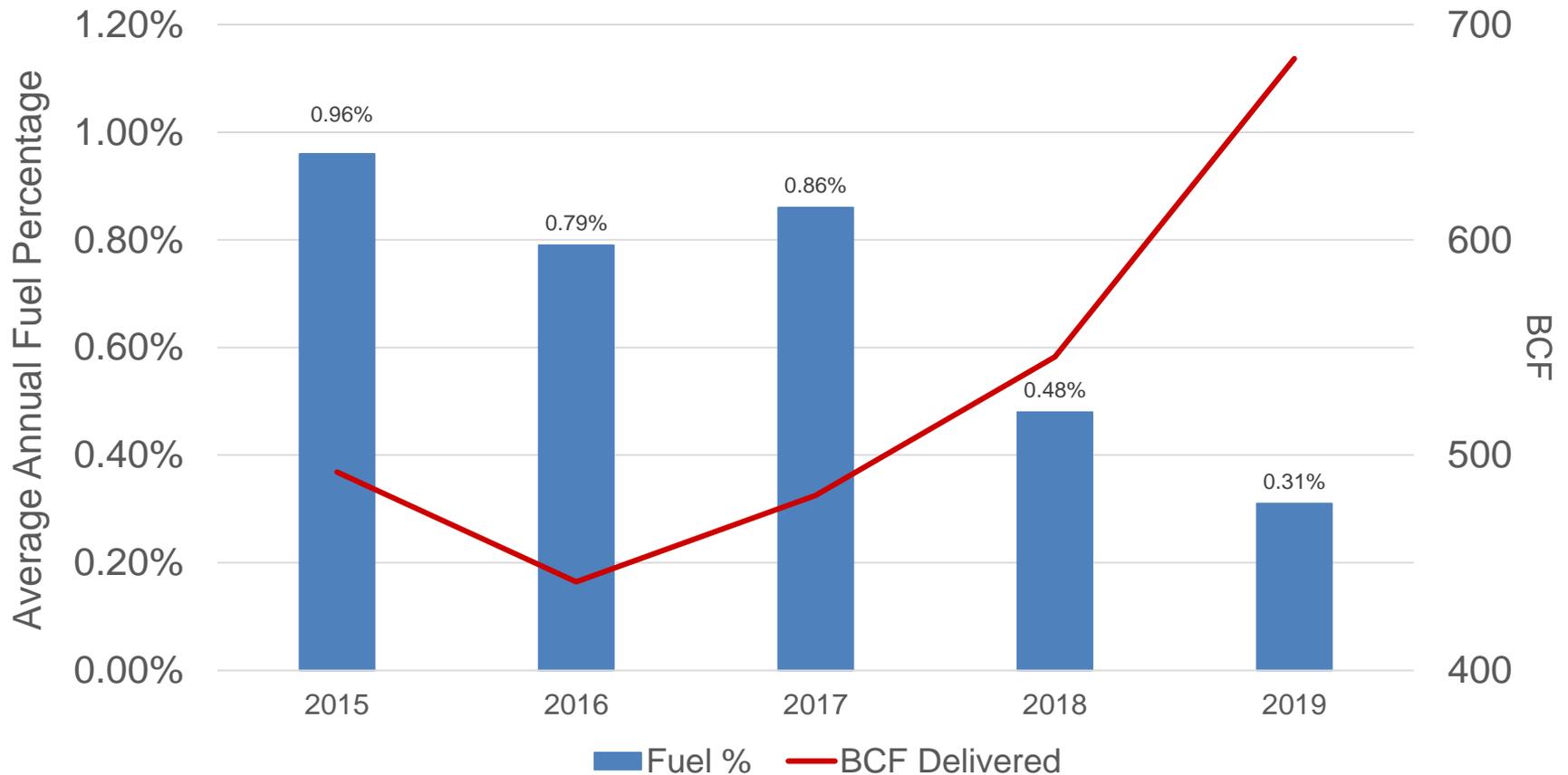
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Operational Efficiency



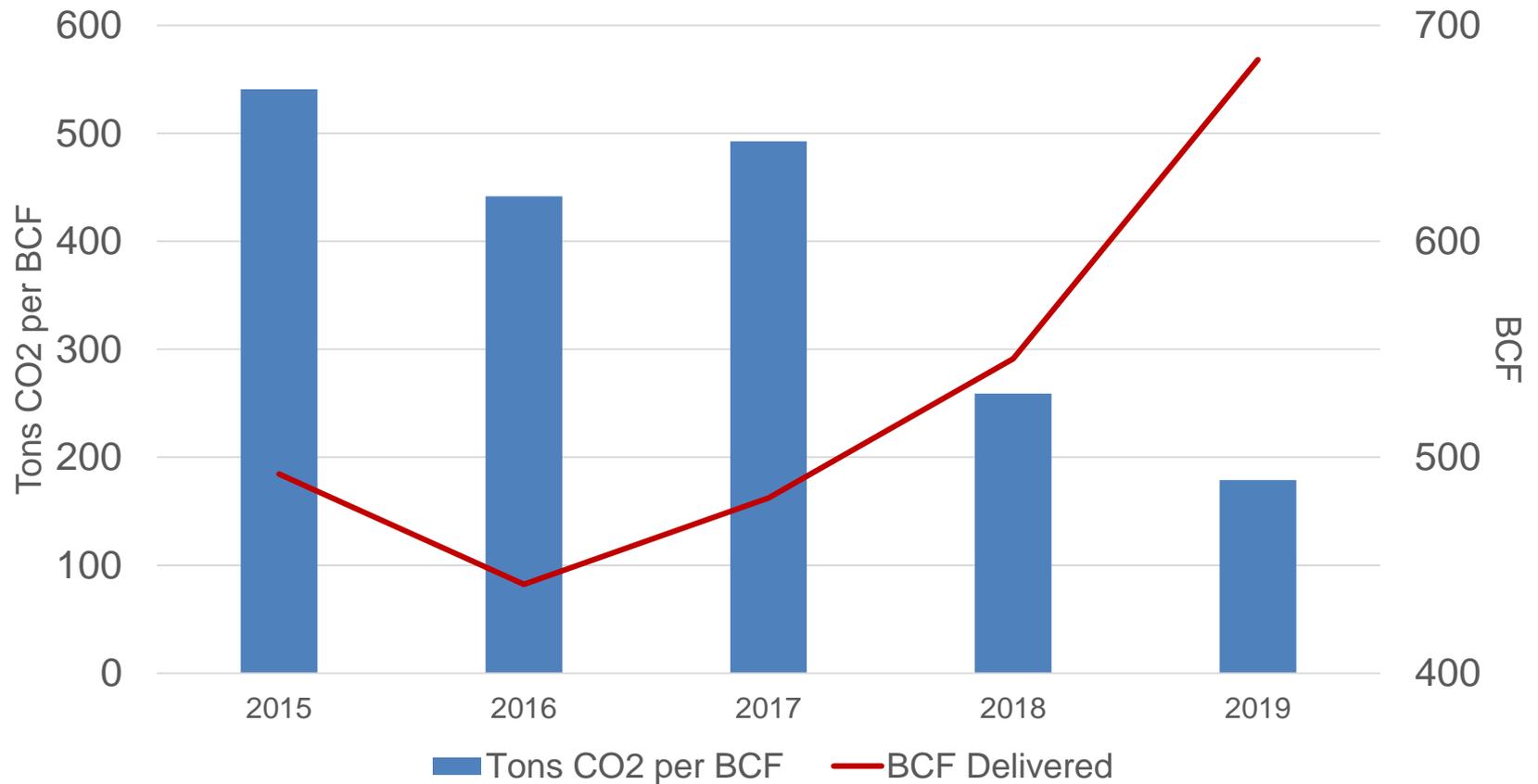
Reducing Fuel Consumption

68% reduction in fuel from 2015 to 2019



Reduction in Greenhouse Gas

67% reduction from 2015 to 2019





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What's Next for Vector



Future Maintenance/Outages

- Athens station pig traps – approximately seven days outage of Joliet to Milford mainline – late summer/early fall 2021.
 - Interconnections along path will be available, but may require alternate paths for service
- Integrity Inspections – Highland Compressor Station Yard Piping. Summer 2021 – service impact unknown.
- Investigating meter sizes at the Alliance and Northern Border interconnections to better suit the lower flows for current operations. (post-2021)



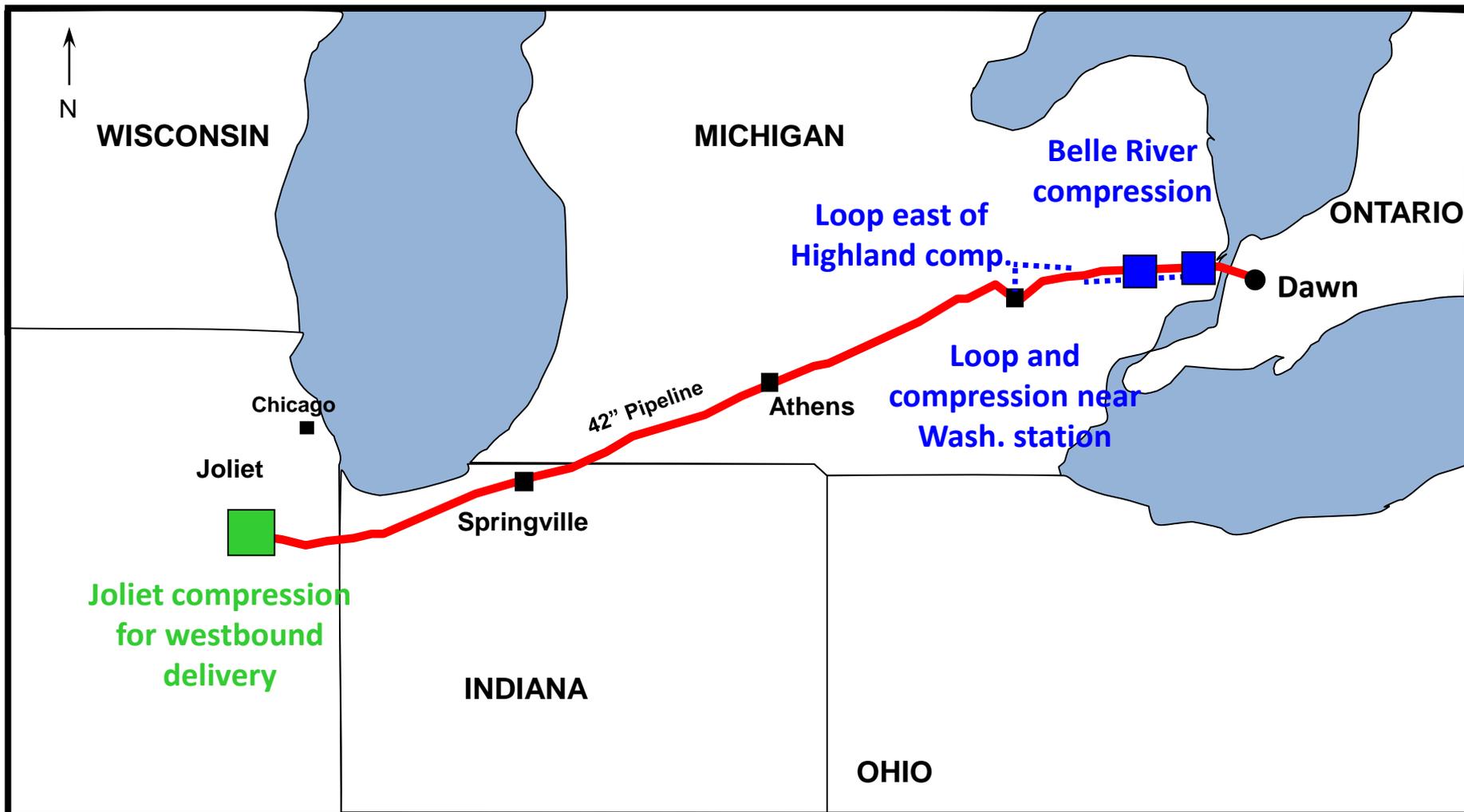
Potential Expansions

- Michigan-Dawn and Michigan-Chicago spreads are strong during the winter months
- Eastbound Expansions:
 - Vector can expand eastbound capacity from MI storage, Appalachian supply or Joliet to Dawn with the addition of loop and compression.
- Westbound Expansions:
 - The eastbound expansion facilities also increase our westbound capacity (MI Storage to Joliet markets)
 - Compression can be modified or added at Joliet to deliver Appalachian supply / MI storage services to markets west of Chicago (Northern Border markets)



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Expansion Facilities





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Dennis Scheibe

Manager, Transportation Services



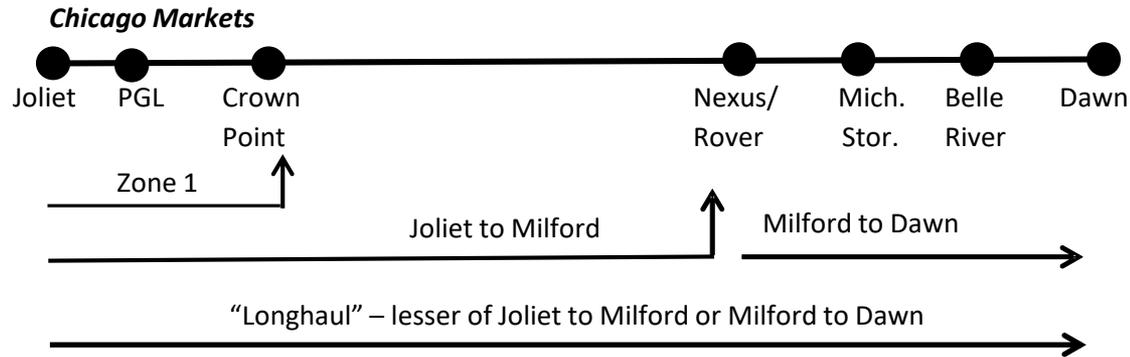
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Capacity Postings



Mainline Capacity Segments

East Bound



West Bound





Example of Capacity Posting

[Vector Pipeline](#) > [Doing Business With Us](#) > [Projected IT Availability](#)

PROJECTED IT AVAILABILITY

October 13, 2020

Note: Vector's "Traditional Joliet to Dawn" longhaul availability can be determined by using the lesser of the "Joliet to Milford Junction" or the "Rover to Dawn" segment.

Projected IT-1 by segment available October 13, 2020 (current day):

- Joliet to Crown Point 1,424,771
- Joliet to Milford Junction 501,937
- Rover to Dawn 501,937
- Milford Junction to Joliet 1,167,970

Projected IT-1 by segment available October 14, 2020:

- Joliet to Crown Point 1,182,158
- Joliet to Milford Junction 92,409
- Rover to Dawn 86,535
- Milford Junction to Joliet 1,002,195



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Available West Bound Capacity

	<u>Winter 20/21</u>	<u>Winter 21/22</u>
<u>Capacity to Joliet</u>		
From Storage	Sold out!	26,292
From Milford	20,100	40,500
<u>Delivery Point</u>		
Crown Point	416,000	426,000
Peoples Gas	97,800	97,800
Guardian	Sold out!	56,272

Available East Bound Capacity

November 2020

November 2021

From Joliet:

Zone 1 Delivery	335,000	335,000
Milford Delivery	256,200	256,200
Dawn Delivery (LH)	Sold out!	TBD



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Winter Forward Spreads

October 12, 2020

	<u>20/21</u>	<u>21/22</u>
MichCon to Dawn	\$0.191	\$0.134
MichCon to Chicago	\$0.250	\$0.200



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Contract Path / Secondary Point Reminder



Contract Path / Secondary Points

- Contract and flow patterns may limit Shippers' abilities to flow to secondary out-of-path points
- Secondary In-path: Between primary receipt and primary delivery and in the same direction at contract rate
- Secondary Out-of-Path: Outside of the primary receipt or delivery and/or in the opposite direction of the primary path.
 - Unless explicitly agreed to with Vector, secondary, out-of-path points are not discounted.
- Direction Matters!



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QuickNom Enhancement



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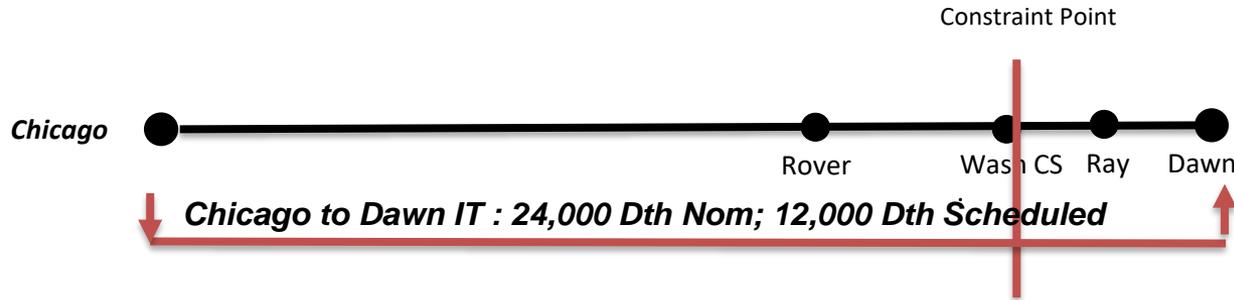
QuickNom Enhancement Nomination Redirect

- Applies when there is a mainline capacity constraint
- Allows firm secondary or IT nomination paths to make a nomination change in succeeding cycles without losing allocation priority
- Nom change must be made to an existing nom ID
- Ability to maintain allocation priority up to the previously scheduled quantity
- EPSQ applies

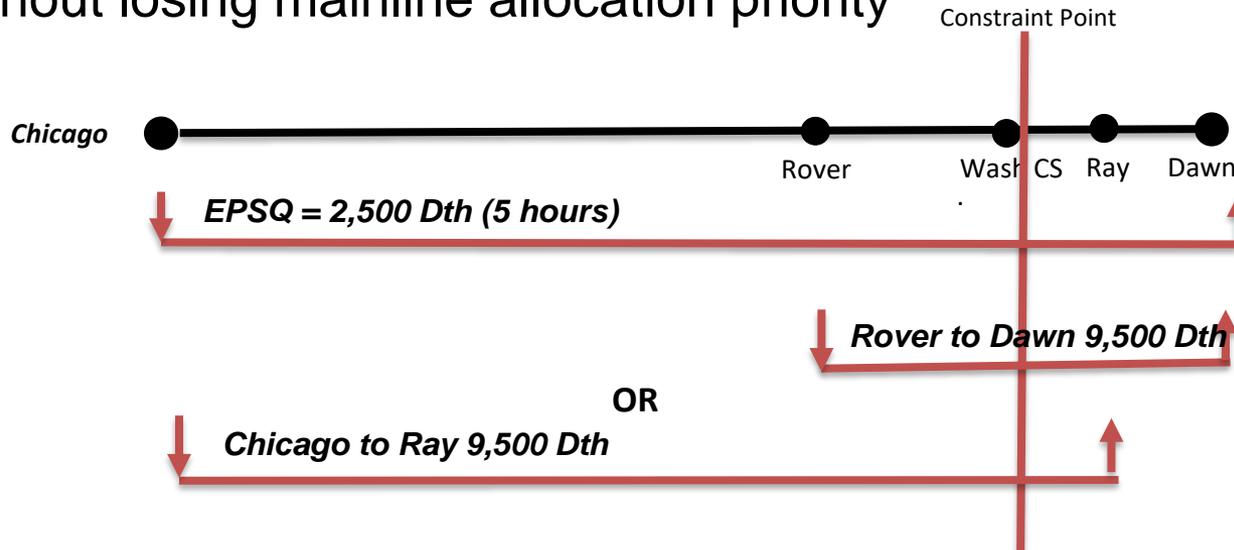


Nomination Redirect Example Washington CS Restriction

Timely: IT Nom Chi-Dawn 24k with 12k Scheduled (50% restriction)



ID-1: Shipper can move receipt point to Rover or delivery to Ray without losing mainline allocation priority





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2020 Mastio Survey Results



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Rating the Importance of Attributes

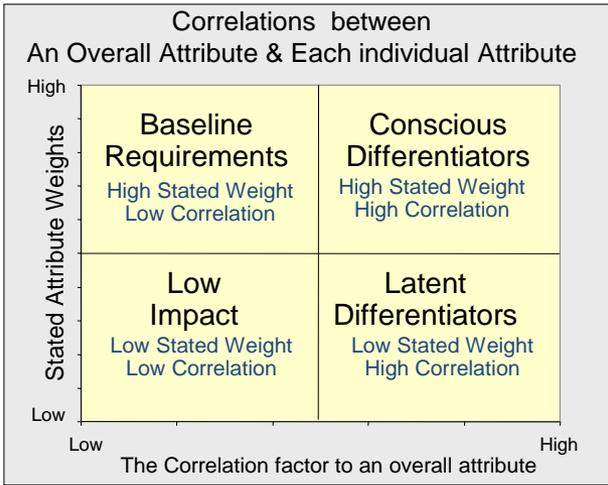
Vector Study - 2020		
Customer Needs		
Overall (65 Respondents)		
Rank	Attribute	Score
1	Historically dependable in meeting commitments.	9.89
2	Firm gas transportation is highly reliable.	9.88
3	Accuracy of gas metering statements and invoices.	9.86
4	Scheduled gas volumes are accurate.	9.74
5	Timely notification before initiating restrictions.	9.69
6	Integrity of transportation provider.	9.59
7	Timely transmittal of invoices.	9.48
8	Expertise of personnel.	9.47
9	Competitive pricing of service.	9.46
10	Problems are resolved timely.	9.42
11	Personnel respond quickly to requests.	9.41
12	Ease of doing business.	9.41
13	Representatives who listen well.	9.40
14	Ease of structuring credit arrangements.	9.33
15	Easy to contact the right person for help.	9.27
16	Contract negotiations are handled efficiently.	9.23
17	Operational information is readily available.	9.22
18	Ease of the pipelines system for nominating and reporting.	9.07
19	Ease of use of QuickNom system.	9.04
20	Simple and straightforward capacity release system and procedures.	8.93
21	Quality of pipeline initiated communications.	8.89
22	Direct access to ample and diverse supply.	8.78
23	Contract execution and amendments are handled efficiently.	8.55
24	Ease of use of Vector's website.	8.48



Correlating Attributes With Customer Satisfaction

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BASILINE REQUIREMENTS - Entry tickets to the market, competent performance is expected. Gaps in baseline requirements are known to cause switching. Closing gaps in baseline factors is first priority. Some competitors choose to differentiate on baseline req's.

CONSCIOUS DIFFERENTIATORS - Actively drive supplier selection decisions. **Winning on these factors can be a power force for profitability, growth and customer retention.** Closing gaps in conscious differentiators takes second priority.

LATENT DIFFERENTIATORS - Customer don't say these factors are important but they correlate highly to the dependent variable that assesses overall satisfaction with a supplier. **Latent differentiators represent opportunities to make a pull-ahead move.**

LOW IMPACT - Low impact items are areas where performance at parity with competitors is sufficient.

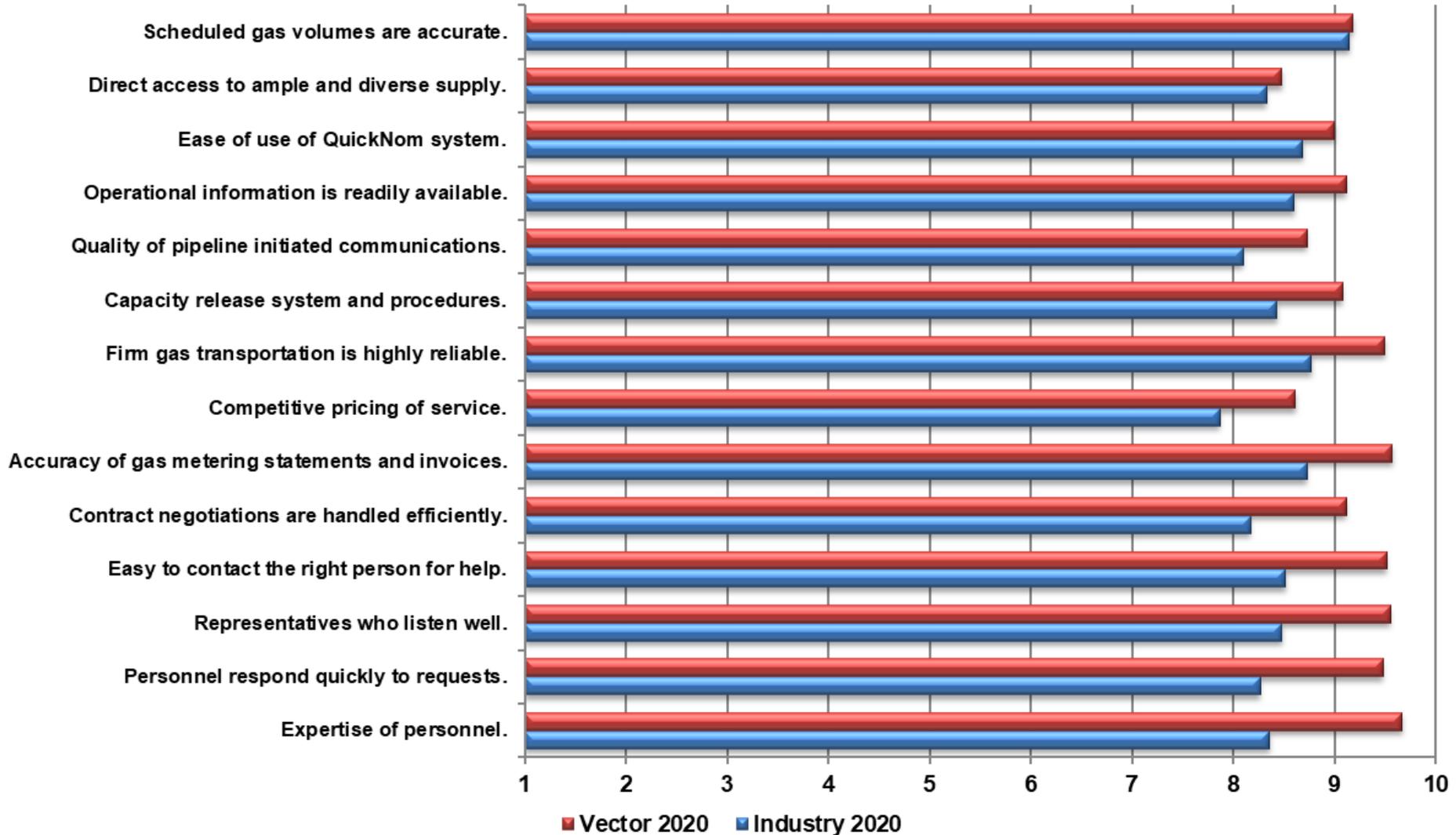
Attributes	2020	2018	2016	2014
Firm gas transportation is highly reliable.	Baseline	Baseline	Baseline	Baseline
Timely transmittal of invoices.	Baseline	Baseline	Baseline	Baseline
Accuracy of gas metering statements and invoices.	Baseline	Baseline	Conscious	Conscious
Integrity of transportation provider.	Baseline	Baseline	Conscious	Conscious
Timely notification before initiating restrictions.	Baseline	Conscious	Baseline	Conscious
Competitive pricing of service.	Baseline	Latent	Conscious	Baseline
Ease of structuring credit arrangements.	Baseline	Low	Baseline	Latent
Scheduled gas volumes are accurate.	Conscious	Baseline	Conscious	Baseline
Representatives who listen well.	Conscious	Baseline	Conscious	Low
Historically dependable in meeting commitments.	Conscious	Conscious	Baseline	Conscious
Problems are resolved timely.	Conscious	Conscious	Baseline	Latent
Ease of doing business.	Conscious	Conscious	Conscious	Latent
Expertise of personnel.	Conscious	Latent	Conscious	Low
Personnel respond quickly to requests.	Conscious	Low	Baseline	Latent
Simple and straightforward capacity release system and procedures.	Latent	Conscious	Latent	Low
Quality of pipeline initiated communications.	Latent	Low	Latent	Latent
Easy to contact the right person for help.	Latent	Low	Low	Low
Ease of the pipelines system for nominating and reporting.	Low	Baseline	Conscious	Low
Ease of use of QuickNom system.	Low	Latent	Conscious	Low
Contract execution and amendments are handled efficiently.	Low	Latent	Latent	Low
Contract negotiations are handled efficiently.	Low	Latent	Low	Conscious
Ease of use of Vector's website.	Low	Latent	Low	Latent
Operational information is readily available.	Low	Latent	Low	Low
Direct access to ample and diverse supply.	Low	Low	Low	Latent



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Vector vs. The Industry

Performance Exceeds The Industry Average!





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Vector's Industry Ranking Interstate Pipelines

Rank	Pipeline	Score
1	Kern River Gas Transmission Co.	96.64
2	Northern Natural Gas Co.	93.52
3	Williams Gas Pipeline-Northwest	92.44
4	Dominion Energy Questar Pipeline	87.83
5	Southern Natural Gas Co.	85.99
6	Northern Border Pipeline Co.	84.20
7	Southern Star Central	83.87
8	Vector Pipeline	83.23
9	ANR Pipeline Co.	82.72
10	Columbia Gas Transmission Corp.	81.31
11	Tennessee Gas Pipeline Co.	81.00
12	El Paso Natural Gas Co.	80.56
13	Colorado Interstate Gas Co.	80.13
14	Dominion Transmission, Inc.	79.56
15	Williams Gas Pipeline-Transco	78.79
16	Panhandle Eastern Pipe Line Co.	78.71
17	Natural Gas Pipeline Co. of America	74.49
18	Texas Eastern Transmission Corp.	74.47

Progress!

2016: 10th

2018: 14th

2020: 8th



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2020 vs 2018 Performance

Marketing Respondents

Attribute	2020 Score	2018 Score	Difference	% Change
Ease of the pipelines system for nominating and reporting.	9.33	8.67	0.67	7.7%
Timely notification before initiating restrictions.	9.38	8.80	0.57	6.5%
Quality of pipeline initiated communications.	8.73	8.26	0.47	5.7%
Personnel respond quickly to requests.	9.48	9.05	0.43	4.8%
Ease of structuring credit arrangements.	9.27	8.86	0.41	4.6%
Representatives who listen well.	9.56	9.20	0.36	3.9%
Timely transmittal of invoices.	9.71	9.38	0.33	3.5%
Ease of use of QuickNom system.	9.00	8.70	0.30	3.4%
How likely would you be to recommend this company?	9.81	9.50	0.31	3.3%
Historically dependable in meeting commitments.	9.78	9.47	0.30	3.2%
Problems are resolved timely.	9.35	9.06	0.29	3.2%
Expertise of personnel.	9.67	9.40	0.27	2.8%
Easy to contact the right person for help.	9.52	9.26	0.26	2.8%
Competitive pricing of service.	8.62	8.39	0.23	2.7%
Integrity of transportation provider.	9.70	9.45	0.25	2.7%
Contract execution and amendments are handled efficiently.	9.68	9.47	0.21	2.2%
Ease of doing business.	9.41	9.25	0.16	1.7%
Overall company performance on all non-price factors.	9.44	9.30	0.14	1.6%
Simple and straightforward capacity release system and procedures.	9.08	9.09	-0.01	-0.1%
Accuracy of gas metering statements and invoices.	9.57	9.67	-0.10	-1.0%
Operational information is readily available.	9.12	9.24	-0.12	-1.2%
Contract negotiations are handled efficiently.	9.12	9.32	-0.20	-2.2%
Scheduled gas volumes are accurate.	9.18	9.41	-0.23	-2.4%
Firm gas transportation is highly reliable.	9.50	9.79	-0.29	-3.0%
Ease of use of Vector's website.	8.92	9.22	-0.31	-3.3%
Direct access to ample and diverse supply.	8.48	8.80	-0.32	-3.7%

BASELINE REQUIREMENTS

CONSCIOUS DIFFERENTIATORS

LATENT DIFFERENTIATORS

LOW IMPACT



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2020 vs 2018 Performance Invoicing Respondents

Attribute	2020 Score	2018 Score	Difference	% Change
Problems are resolved timely.	9.36	9.12	0.24	2.6%
Personnel respond quickly to requests.	9.53	9.33	0.20	2.1%
Accuracy of gas metering statements and invoices.	9.76	9.68	0.08	0.8%
Representatives who listen well.	9.29	9.29	0.00	0.0%
Expertise of personnel.	9.36	9.38	-0.02	-0.2%
Quality of pipeline initiated communications.	8.90	8.93	-0.03	-0.4%
Timely transmittal of invoices.	9.50	9.79	-0.29	-3.0%
How likely would you be to recommend this company?	9.48	9.78	-0.30	-3.1%
Easy to contact the right person for help.	9.07	9.47	-0.40	-4.3%

BASELINE REQUIREMENTS
CONSCIOUS DIFFERENTIATORS
LATENT DIFFERENTIATORS
LOW IMPACT



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2020 vs 2018 Performance

Scheduling Respondents

Attribute	2020 Score	2018 Score	Difference	% Change
Ease of the pipelines system for nominating and reporting.	8.75	8.35	0.40	4.8%
Ease of use of QuickNom system.	8.85	8.52	0.33	3.8%
Timely notification before initiating restrictions.	9.00	8.71	0.29	3.3%
Ease of use of Vector's website.	8.58	8.41	0.17	2.1%
Personnel respond quickly to requests.	8.22	8.27	-0.06	-0.7%
Quality of pipeline initiated communications.	7.81	8.04	-0.23	-2.9%
Operational information is readily available.	8.65	9.00	-0.35	-3.9%
Simple and straightforward capacity release system and procedures.	8.65	9.09	-0.44	-4.9%
Representatives who listen well.	8.32	8.83	-0.51	-5.8%
Scheduled gas volumes are accurate.	8.46	9.00	-0.54	-6.0%
Problems are resolved timely.	7.91	8.50	-0.59	-6.9%
Ease of doing business.	8.13	8.75	-0.63	-7.1%
Expertise of personnel.	7.61	8.26	-0.65	-7.9%
Easy to contact the right person for help.	7.71	8.46	-0.75	-8.9%
How likely would you be to recommend this company?	8.00	9.04	-1.04	-11.5%

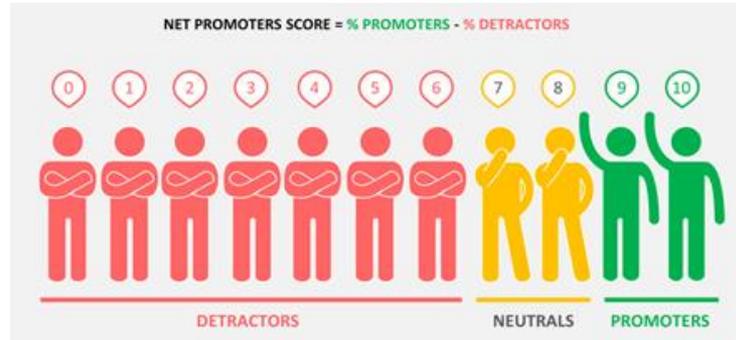
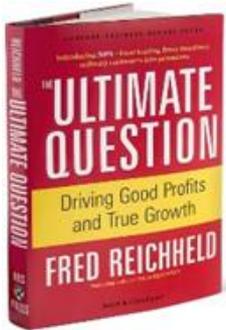
BASELINE REQUIREMENTS
CONSCIOUS DIFFERENTIATORS
LATENT DIFFERENTIATORS
LOW IMPACT



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The Net Promoter Score

A Key Piece in Maximizing Performance



What is it:

NPS determines the % of promoters and detractors each supplier has within its respective industry.

Based on:

“How likely would you recommend to a colleague or another business”...

Benefits:

• Unlike Customer Satisfaction, there is a strong correlation to financial performance.

Promoters: Loyal, invested customers
Passives: Neutral, not fully invested
Detractors: Dissatisfied



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Net Promotor Score Overview

Promoters

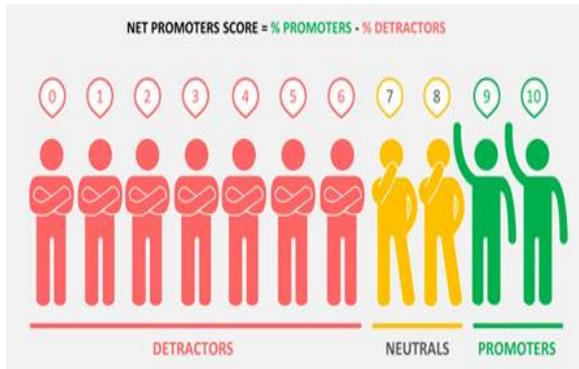
Loyal, invested customers. They stay longer, buy more and recommend you.

Passives

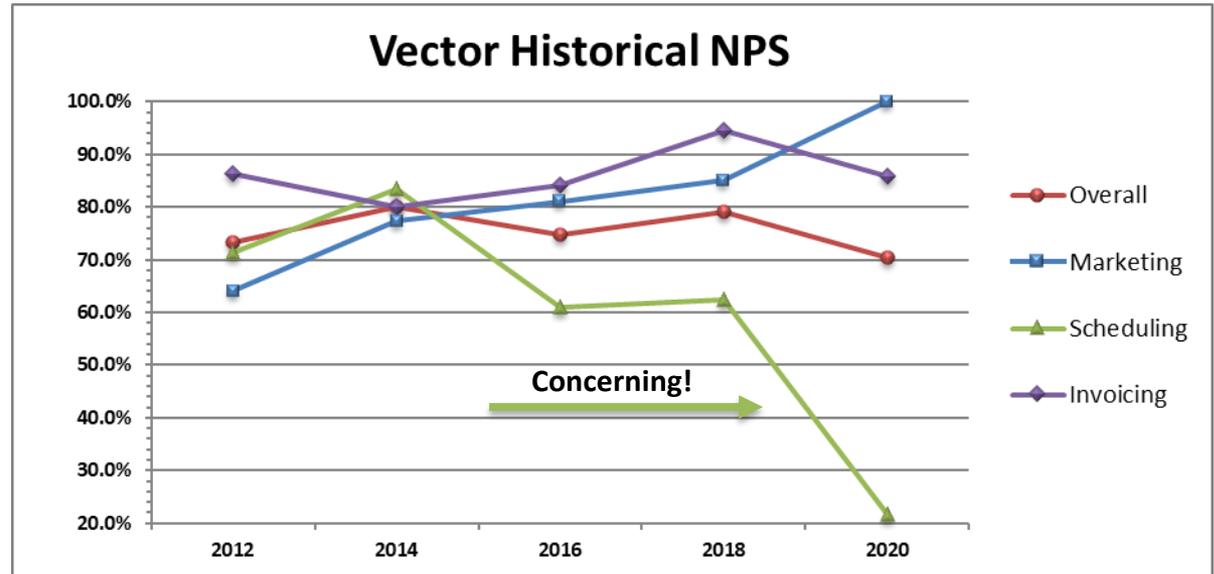
Neutral, not fully invested. Could be easily attracted with a better offer.

Detractors

Dissatisfied. More likely to defect and recommend AGAINST your company.



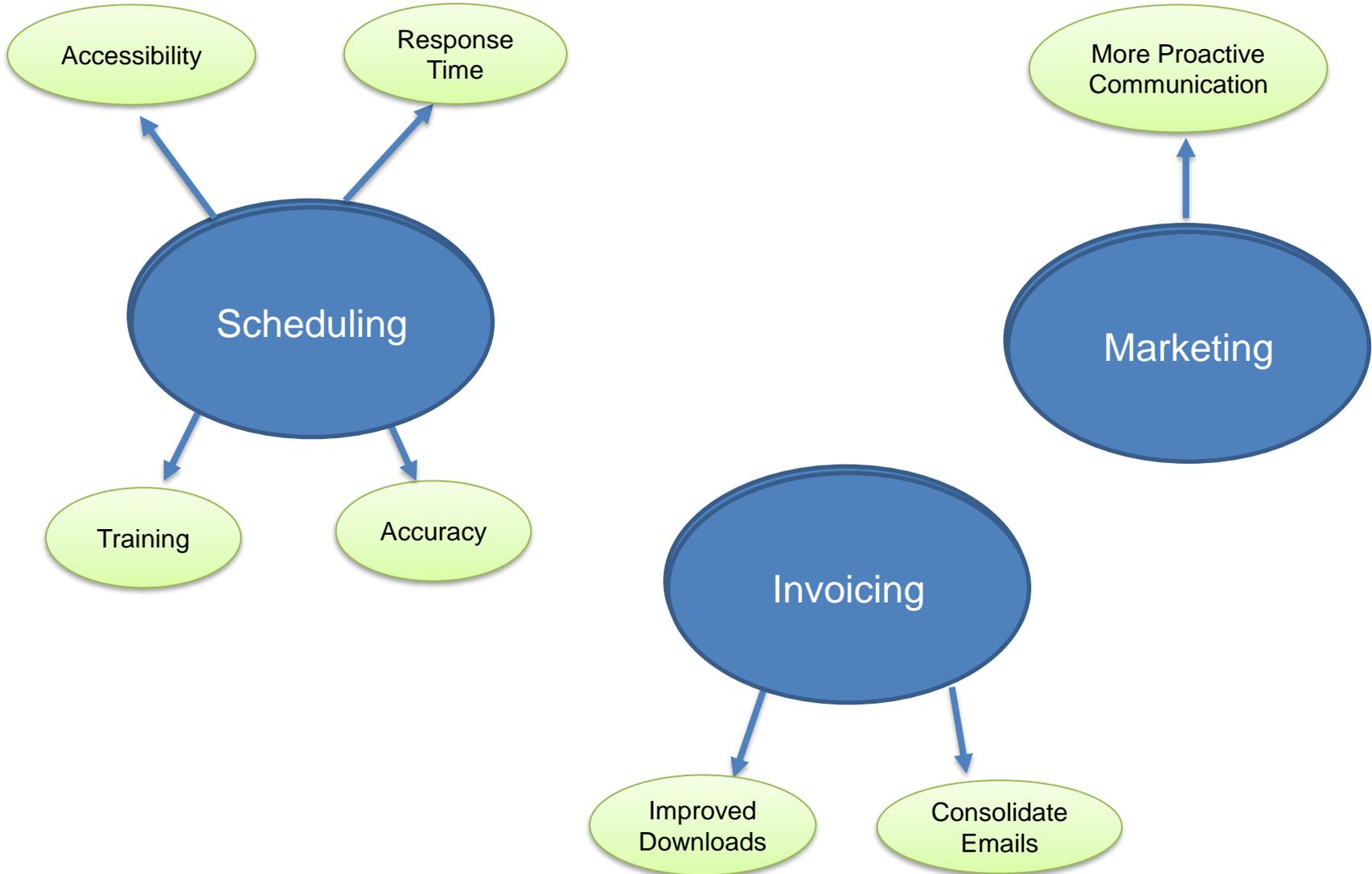
Vector	# of Observations	% of Promoters	% of Detractors	% of Passives	NPS
Marketing	27	100%	0%	0%	100.0%
Invoicing	21	86%	0%	14%	85.7%
Overall	71	77%	7%	15%	70.4%
Scheduling	23	43%	22%	35%	21.7%





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Areas for Improvement





Action Plan for Scheduling

- ✓ Additional Contact Information on QuickNom Login Page and Web site. If no response received when calling Gas Scheduling Hotline contact:
 1. Weekday Mgr Damita Porter damita.porter@enbridge.com
 2. Nights/Weekends Mgr James Cymes james.cymes@enbridge.com
- ✓ ICE chat access for all schedulers
- ✓ Weekly posting for on call contact info for Scheduling
- ✓ More rigorous training of new schedulers along with ongoing review to ensure competency
- ✓ Commitment to periodic commercial training for Gas Scheduling from Vector Marketing
- ✓ QuickNom enhancement: TTS change to allow schedulers to more easily confirm title transfers.



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Email Blasts of Vector's Notices

In Response to Customer Feedback

Changed our FROM Email address on
Notices

Old: infopostings@latitude.net

New: vector@latitude.net

Hopefully results in heightened awareness!



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Email Blasts of Vector's Notices

To be added or deleted from the
distribution list contact Lisa at:

lisa.steinman@vector-pipeline.com



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Questions ?



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Thank You!
We appreciate your business!

Proudly serving our customers for 20 years!

2000 - 2020