

Company
Presentation
June 2021



# Forward Looking Statements

All statements, except for statements of historical fact, made in this presentation regarding activities, events or developments the Company expects, believes or anticipates will or may occur in the future are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements are based on assumptions and estimates that management believes are reasonable based on currently available information; however, management's assumptions and Range's future performance are subject to a wide range of business risks and uncertainties and there is no assurance that these goals and projections can or will be met. Any number of factors could cause actual results to differ materially from those in the forward-looking statements. Further information on risks and uncertainties is available in Range's filings with the Securities and Exchange Commission (SEC), including its most recent Annual Report on Form 10-K. Unless required by law, Range undertakes no obligation to publicly update or revise any forward-looking statements to reflect circumstances or events after the date they are made.

The SEC permits oil and gas companies, in filings made with the SEC, to disclose proved reserves, which are estimates that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions as well as the option to disclose probable and possible reserves. Range has elected not to disclose its probable and possible reserves in its filings with the SEC. Range uses certain broader terms such as "resource potential," "unrisked resource potential," "unproved resource potential" or "upside" or other descriptions of volumes of resources potentially recoverable through additional drilling or recovery techniques that may include probable and possible reserves as defined by the SEC's guidelines. Range has not attempted to distinguish probable and possible reserves from these broader classifications. The SEC's rules prohibit us from including in filings with the SEC these broader classifications of reserves. These estimates are by their nature more speculative than estimates of proved, probable and possible reserves and accordingly are subject to substantially greater risk of actually being realized. Unproved resource potential refers to Range's internal estimates of hydrocarbon quantities that may be potentially discovered through exploratory drilling or recovered with additional drilling or recovery techniques and have not been reviewed by independent engineers. Unproved resource potential does not constitute reserves within the meaning of the Society of Petroleum Engineer's Petroleum Resource Management System and does not include proved reserves. Area wide unproven resource potential has not been fully risked by Range's management. "EUR", or estimated ultimate recovery, refers to our management's estimates of hydrocarbon quantities that may be recovered from a well completed as a producer in the area. These quantities may not necessarily constitute or represent reserves within the meaning of the Society of Petroleum Engineer's Petroleum Resource Management System or the SEC's oil and natural gas disclosure rules. Actual quantities that may be recovered from Range's interests could differ substantially. Factors affecting ultimate recovery include the scope of Range's drilling program, which will be directly affected by the availability of capital, drilling and production costs, commodity prices, availability of drilling services and equipment, drilling results, lease expirations, transportation constraints, regulatory approvals, field spacing rules, recoveries of gas in place, length of horizontal laterals, actual drilling results, including geological and mechanical factors affecting recovery rates and other factors. Estimates of resource potential may change significantly as development of our resource plays provides additional data.

In addition, our production forecasts and expectations for future periods are dependent upon many assumptions, including estimates of production decline rates from existing wells and the undertaking and outcome of future drilling activity, which may be affected by significant commodity price declines or drilling cost increases. Investors are urged to consider closely the disclosure in our most recent Annual Report on Form 10-K, available from our website at <a href="www.rangeresources.com">www.rangeresources.com</a> or by written request to 100 Throckmorton Street, Suite 1200, Fort Worth, Texas 76102. You can also obtain this Form 10-K on the SEC's website at <a href="www.sec.gov">www.sec.gov</a> or by calling the SEC at 1-800-SEC-0330.

# Range – Who We Are



- Top 10 U.S. Producer of Natural Gas & NGLs
- Top NGL Exporter Among Independent E&Ps
- Pioneered Marcellus Shale in 2004
- Lowest Breakeven Price Among Southwest Appalachia E&Ps
- Longest Core Inventory Life in Appalachia
- Upstream Leader in Environmental Practices

# Range – At a Glance

#### **Focus on Free Cash Flow**

- Peer-leading well costs and base decline rate drive low sustaining capital requirements
- Cost structure improvements and marketing strategies have reduced breakeven price
- Low sustaining capital requirements and breakeven support significant and durable free cash flow generation at strip pricing

#### **Unmatched Appalachian Inventory**

- Approximately one-half million net acres provide decades of low-risk drilling inventory
- Contiguous position allows for efficient operations and long-lateral development
- Proved Reserves of 17.2 Tcfe at YE2020 PV-10 of over \$22 per share, net of debt<sup>(a)</sup>

#### **Upstream Leader on Environmental Practices and Safety**

- Targeting net zero emissions by 2025
- Reduced environmental impact and enhanced profitability through:
  - Water recycling and logistics
  - Long-lateral development
  - Electric-powered fracturing fleet
  - Innovative facility designs
  - Robust Leak Detection and Remediation (LDAR) program

Management Incentives Aligned to Support Free Cash Flow, Corporate Returns, Balance Sheet Strength & Environmental Leadership

# Delivering on Strategic Objectives

#### ✓ Most Capital Efficient Operator in Appalachia<sup>(a)</sup>

- 2018-2020 D&C Capex of ~\$280 per Mcfepd versus peer average of ~\$385 per Mcfepd
- Delivered on operational plans while spending under budget for three consecutive years

#### ✓ Enhanced Margins Through Cost Improvements & Marketing Strategies

- 2020 cash unit costs of \$1.85/mcfe improved \$0.33, or ~15% since end of 2018
- Increased exports improved NGL realizations versus Mont Belvieu by over \$3.50 per barrel in 2020 versus 2018

#### ✓ Strengthened Balance Sheet & Maturity Profiles

- Reduced absolute debt for three consecutive years
- Current liquidity of ~\$1.9 billion<sup>(b)</sup> can expand via free cash flow and potential asset sales
- Approximately \$0.2 billion<sup>(b)</sup> senior notes due by end of 2022

#### ✓ Successful Emissions Reduction & Water Recycling Programs

- Lowest emissions intensity within U.S. upstream sector
- Recycled 148% of produced water in 2020 through Range's water recycling and sharing program

### 2021 Outlook

#### All-In Capital Budget of \$425 Million or Less

- Production to be maintained at ~2.15 Bcfe per day
- 2021 activity sets up capital efficient 2022 development plan

# Absolute Debt Expected to Be Reduced for Fourth Consecutive Year via Free Cash Flow

#### Significant EBITDA and Cash Flow Growth Forecasted at Strip Pricing

#### Leverage Expected to Decline Considerably in 2021 and Beyond

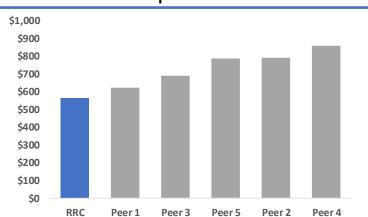
- Targeting leverage of below 3x at YE2021 based on strip pricing
- Potential for leverage to decline below 2x by YE2022 at \$2.85 natural gas and \$60 oil

#### **Maintain Strong Environmental & Safety Practices**

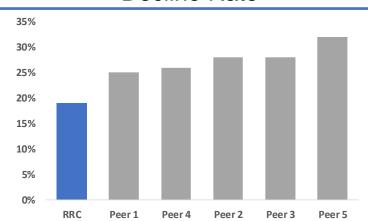
- Targeting net zero emissions by 2025
- Continue to recycle all of Range's produced water, in addition to third party water
- Further improve safety through implementation of new software, enhancing efficiency and reducing truck traffic and emissions

# Peer-Leading Capital Efficiency





#### Decline Rate

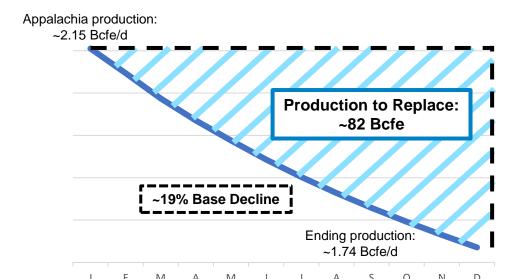


D&C Capex per Mcfepd Reflects Relative Capital Efficiency



Peer-Leading Development Costs & Decline Rate Drive Lowest Development Costs per Unit of Production in Appalachia

# Low Maintenance Capital Requirement



#### 1<sup>st</sup> year recoveries<sup>(a)</sup> for SW PA wells:

- Super Rich = 2.93 Bcfe gross (2.33 Bcfe net)
- Wet = 3.77 Bcfe gross (3.00 Bcfe net)
- Dry = 4.17 Bcf gross (3.31 Bcf net)

Average: ~2.88 Bcfe net per well

#### Well Costs(a) for SW PA:

- Super Rich: \$6.57 million
- Wet: \$6.21 millionDry: \$5.49 million
  - Average: ~\$6.1 million cost per well

#### Simple Calculation(b)

- Average well contributes ~1.44 Bcfe net in calendar year if brought on mid-year under perfect conditions
- Production can be held flat with ~57 wells
   57 wells x 1.44 Bcfe recovery = ~82 Bcfe
- ~57 wells x ~\$6.1mm average well cost = ~\$350mm

~\$350 million <u>D&C</u> Maintenance Capital

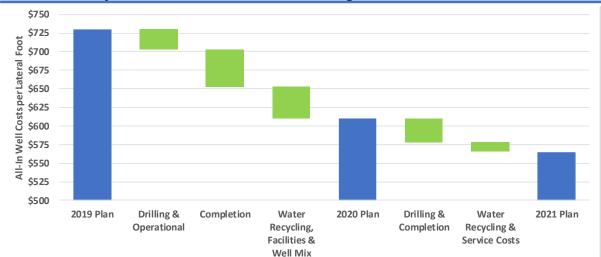
#### Additional Considerations(b)

- Non-D&C investment: ~\$25 million annually
- Typical operating adjustments:
  - Ethane flexibility
  - TIL allocation (wet vs. dry)
  - Timing of TILs
  - Maintenance, weather, etc.

~\$425 million All-In Maintenance Capital

# Well Cost Reductions Enhance Capital Efficiency

Efficiency Gains Have Driven Range's Best-In-Class Well Costs Even Lower...



#### **Sustainable Cost Reductions:**

- Extending average lateral length
- Fuel savings from electric fracturing fleet
- Utilizing recycled water from Range and surrounding operators
- Self-sourcing sand
- Increasing feet drilled per rig day
- Frac efficiency (increasing stages per day per crew)
- Reducing facilities costs

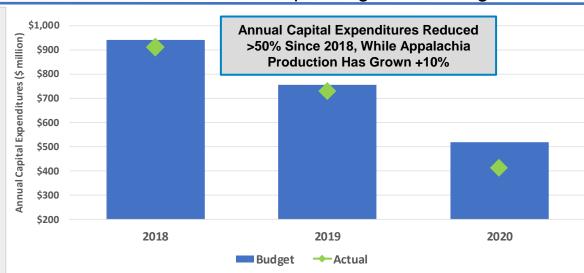
..Leading to Three Consecutive Years of Spending Below Budget

2018: \$31 million under budget

2019: \$28 million under budget

2020: \$109 million under original budget

- Original budget of \$520 million
- Budget reduced to \$430 million in March
- Budget reduced again to \$415 million in October, due to efficiency gains
- Actual 2020 spending of \$411 million



# Considerable Progress in Reducing Unit Costs

#### **Gathering, Processing & Transportation**

 Declined \$0.18 per mcfe, or ~12%, from late 2018 to 2020 through more efficient utilization of infrastructure

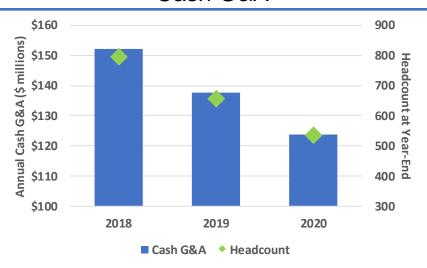
#### Cash G&A

- Declined \$0.04 per mcfe, or ~20%, from 2018 to 2020
- Headcount reduced ~33% from 2018 to 2020 following asset sales and workforce assessment

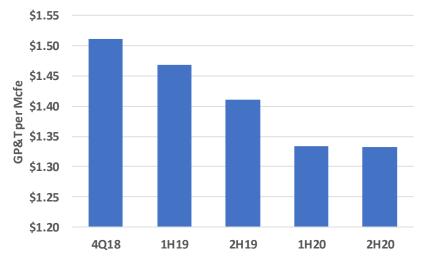
#### **LOE & Production Taxes**

 Declined \$0.15 per mcfe, or ~56%, from late 2018 to 2H20 due to Range's water management and recycling program, as well as divestment of higher cost assets

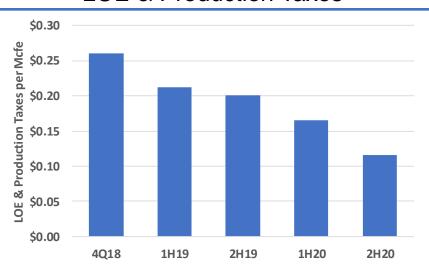
#### Cash G&A



#### Gathering, Processing & Transportation

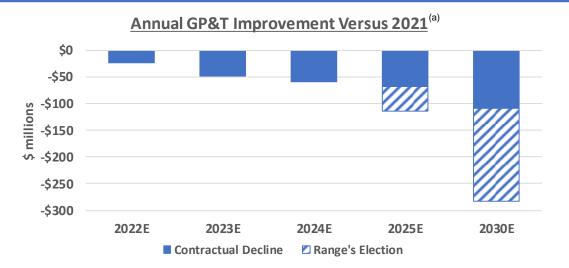


**LOE & Production Taxes** 



## Unit Cost Improvement Expected to Continue

GP&T Contracts Structured to Decline Over Time...



#### **Gathering**

- Certain contracts in Appalachia are structured such that Range's fees decline annually
- Contractual declines continue through 2030 and beyond

#### **Transportation**

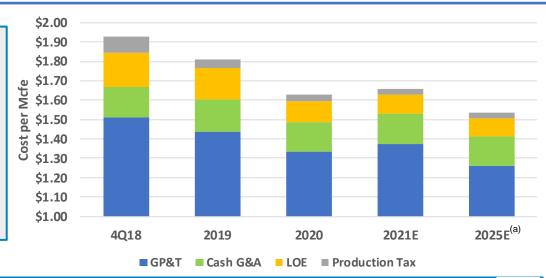
 Range has the option to renew certain contracts or let them expire, depending upon economics

#### ...Driving Continued Annual Declines in Unit Costs

GP&T increases slightly in 2021 versus 2020 due to improved NGL prices and increased Mariner East 2 capacity, which are more than offset by higher NGL revenue.

GP&T is expected to decline over coming years due to contractual declines.

GP&T declines continue beyond 2025.



## Range's Strong NGL Realizations Driven by Exports

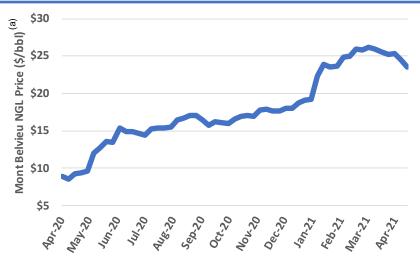
#### **Differentiated NGL Sales Arrangements**

- Range exports a larger percentage of propane and butane than any U.S. independent
- Ability to extract additional ethane based on relative economics

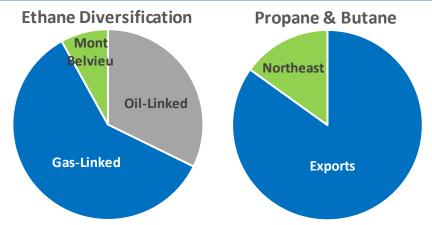
#### **Ability to Export Boosting Realizations**

- Range's differential to Mont Belvieu has improved considerably, driven by increased exports
- Range expects international price arbs to support continued exports
- Realizations expected to improve significantly in 2021 and beyond versus 2020

#### NGL Prices Have Significantly Increased

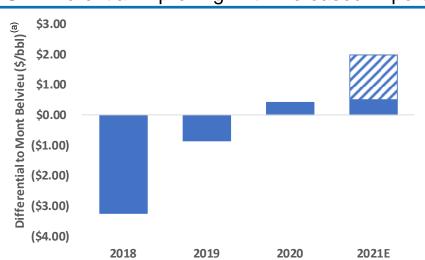


#### Ability to Export Provides Price Diversification



Note: Pie charts represent annual average. Range has the ability to increase domestic sales in winter months when local prices are strong.

#### NGL Differential Improving With Increased Exports



# Lowest Breakeven Among SW Appalachia E&Ps

#### **Best-in-Class Sustaining Capital Requirements**

 Lowest well costs and base decline rate in Appalachia drive lowest maintenance capital requirements per mcfe

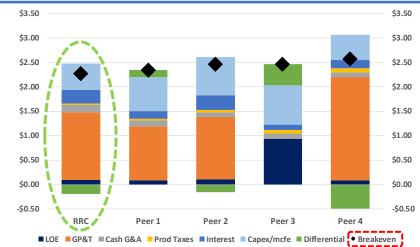
#### **Competitive Cost Structure**

- Range has the lowest normalized cost structure among wet gas peers
- Processing costs more than offset by higher realized prices from liquids sales
- Range expects its cost structure to continue to improve, even under a zero-growth scenario

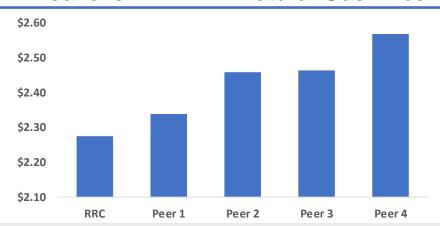
#### **Strong Price Realizations versus NYMEX**

- Range's unhedged realized price per mcfe is typically above NYMEX natural gas price
- Strong realizations driven by liquids price uplift and competitive marketing strategies
- Dry gas peers typically realize prices <u>below</u> NYMEX natural gas, increasing breakeven price requirements

#### Liquids Price Uplift Improves Breakeven



#### Breakeven NYMEX Natural Gas Price



Range's Low Corporate Breakeven & Multi-Decade Core Inventory Drive Highly-Competitive, Sustainable Free Cash Flow

# Clear Path to Significant Debt Reduction

#### 2021 Outlook (\$2.85 Natural Gas / \$60 WTI)

- Free cash flow drives fourth consecutive year of absolute debt reduction
- Significant EBITDAX growth versus 2020 driven by higher natural gas and NGL prices
- Leverage declines to <3x by year end</li>

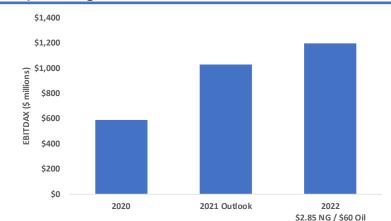
# **Improving Commodity Macro Accelerates Debt Reduction**

- Sharp reduction in industry investment improves commodity price outlook for 2021 and beyond
- Free cash flow from higher prices to be used for debt reduction, as strategy remains maintenance capital

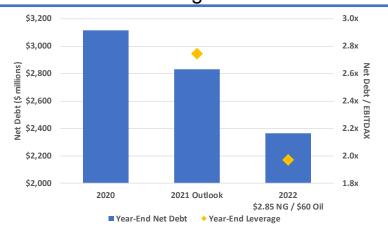
#### **Leverage Could Improve to <2x by YE2022**

- EBITDAX grows further in 2022 at similar commodity prices as 2021, driven by improvements in GP&T expense and Range's low hedge position
- Significant free cash flow generation strengthens balance sheet through reduced debt and interest expense

#### Improving Macro Drives EBITDAX Growth

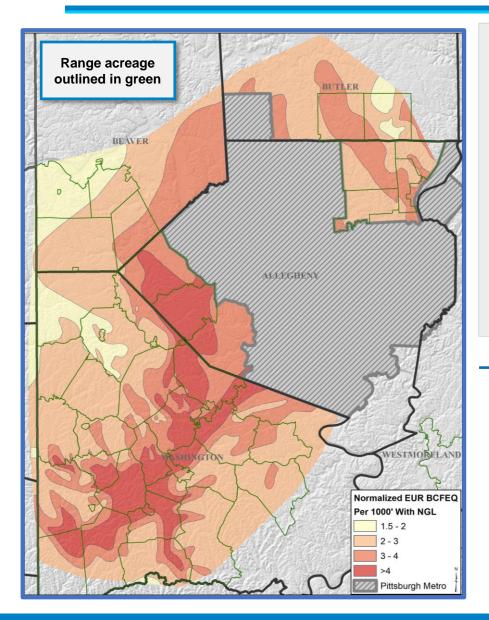


#### Free Cash Flow Strengthens Balance Sheet



At Strip Prices, Range Expects to Generate Significant Free Cash Flow. With Improving Prices, Long-Term Balance Sheet Targets Can Be Met in Near Future.

# Unmatched Position in Southwest Appalachia



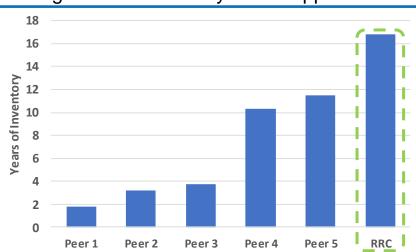
#### **Significant Marcellus Inventory**(a)

- ~460,000 Net Acres in Southwest Pennsylvania
- ~3,100 Undrilled Marcellus Wells
  - 2,600 liquids rich well inventory
  - 500 dry gas well inventory

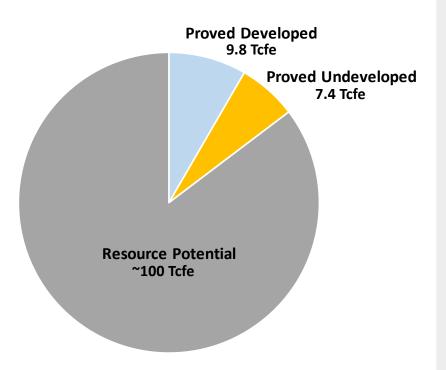
#### **Repeatable Capital Efficiency**

- Range estimates ~2,000 undrilled Marcellus locations remain with EURs greater than 2.0 Bcfe per 1,000 foot of lateral
- In addition, over 1,000 down-spaced Marcellus locations
- Additional potential from Utica & Upper Devonian

Longest Core Inventory Life in Appalachia<sup>(b)</sup>



# Value of Year-End 2020 Proved Reserves



#### Included in SEC Reserves

- By rule, only 5 years of development activity
- Proved Developed reserves of 9.8 Tcfe
- Proved Undeveloped (PUD) reserves of 7.4 Tcfe
- Includes ~360 Marcellus PUD locations

# Reserve Value Ignores Resource Potential

- Approximately 2,700 undrilled Marcellus wells not classified as reserves
- Potential from ~400,000 net acres of both core Utica and Upper Devonian

#### **Reserve History**

- PUD Development Costs consistently improving
- Positive performance revisions to reserves each year for the last decade

PV-10 of \$8.6 Billion Equates to Over \$22/share, Net of Debt<sup>(a)</sup>

# Range to Benefit as Peers Exhaust Core Inventory

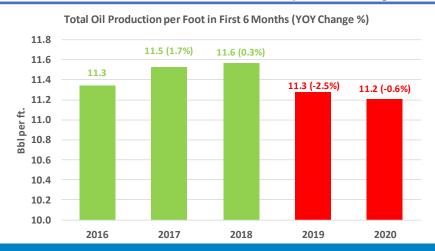
# **Declining Recoveries per Foot in Most Shale Basins Demonstrate Core Exhaustion**

- Declining well productivity is evident in both shale oil and natural gas basins
- Parent-child issues becoming more prevalent
- Up-spacing reduces core inventory life

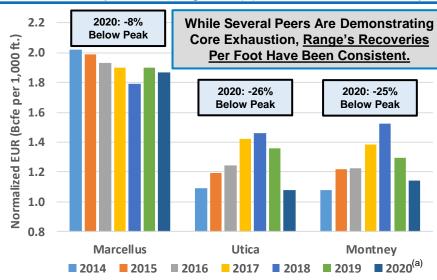
#### **Industry Inventory Is Limited & Concentrated**

- The cores of U.S. shale basins are known
- Most remaining core inventory is concentrated within portfolios of a small group of producers
- Companies with the longest core inventory life, such as Range, should benefit as other operators exhaust their core inventories

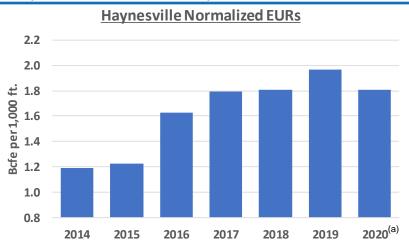
#### Shale Oil Recoveries Already Declining



#### Productivity Declining in Appalachia & Montney



#### Haynesville Productivity Has Also Plateaued



# Natural Gas Macro Has Significantly Improved

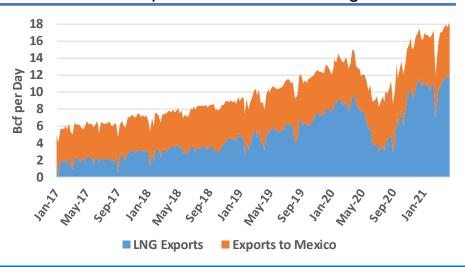
#### **Natural Gas Supply Has Declined Materially**

- EIA forecasts supply to decline ~0.2 Bcf/d exit-to-exit in 2021, following estimated ~4.5 Bcf/d decline in 2020
- Future supply will be affected by significant reduction in industry activity, as natural gas rig count has declined >50% from early 2019
- Recent industry efficiency likely unsustainable following >1,600 DUC drawdown since June 2020

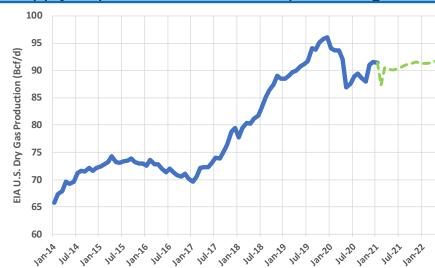
#### Natural Gas Demand Has Been Resilient

- Recent exports of ~18 Bcf/d are >45% higher than 2020 average
- Export capacity to grow further in 2021 and beyond

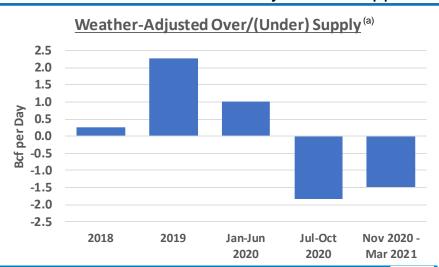
#### U.S. Exports Are at Record Highs



#### Supply Expected to Flatten Despite Rising Prices



#### Natural Gas Market Currently Under-Supplied



# NGL Prices Rising As Macro Improves

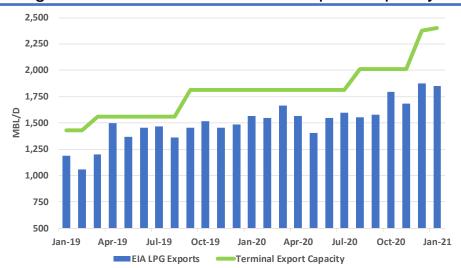
#### **Supply Forecasted to Be Stable**

- Reduced activity in 2020 and industry focus on capital discipline reduces potential for supply growth
- EIA forecasts U.S. C3+ supply to average ~4% lower in 2021 versus 2020 highs

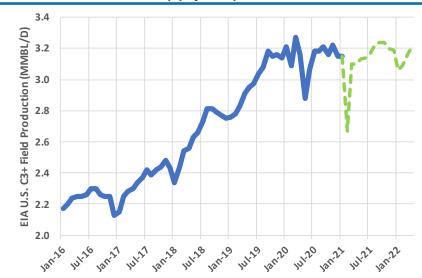
# **Significant Storage Withdrawals Demonstrate Level of Under-Supply**

- U.S. LPG export capacity grew ~23% in 2020, with additional export capacity to come online in 2021
- 2020-21 winter experienced largest propane storage withdrawal in over a decade

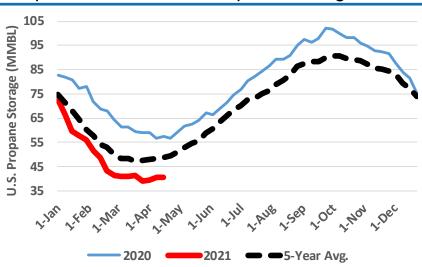
#### Significant Growth in U.S. LPG Export Capacity



#### U.S. C3+ Supply Expected to Flatten



Rapid Decline in U.S. Propane Storage Levels



# Natural Gas Plays Critical Role in Energy Transition

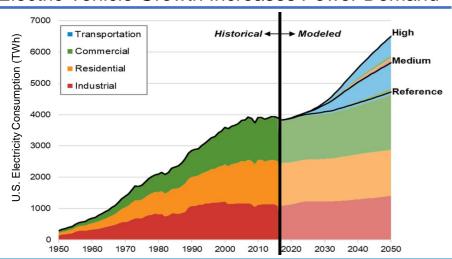
#### **Emissions Reductions Driven by Natural Gas**

- Between 2005 and 2019, total U.S. electricity generation increased ~2%, while related CO2 emissions decreased ~33%
- EIA attributes ~61% of U.S. power generation emissions reductions to natural gas displacing coal

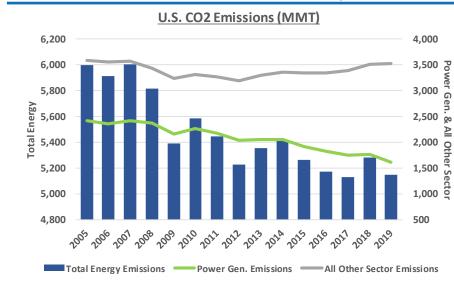
#### **Natural Gas to Reduce Global Emissions**

- China and India are increasing natural gas use in efforts to reduce emissions growth
- Electrification of domestic and global economies will boost power demand, much of which will be supplied by natural gas

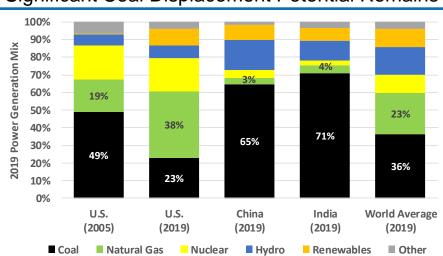
#### Electric Vehicle Growth Increases Power Demand



#### U.S. Emissions Reductions Driven by Power Gen.



#### Significant Coal Displacement Potential Remains



# Leading in Environmental Practices

#### **Commitment to Clean & Efficient Operations**

- Over 80% reduction in GHG emissions intensity since 2011
- Class-leading GHG emissions intensity of <0.25 metric tons of CO<sub>2</sub>e per Mmcfe produced in 2020<sup>(a)</sup>
- Recycled 148% of produced water volume through Range's water recycling and sharing program in 2020
- Reduced component-related emissions by 67% due to increased LDAR program

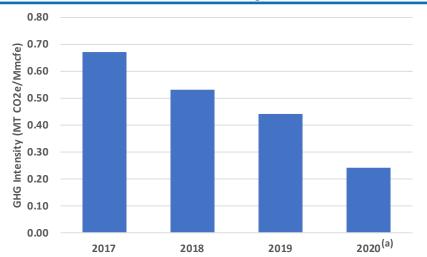
#### **Industry-Leading Emissions Targets**

- 15% reduction in GHG emissions intensity by 2025 versus 2019 levels
- <u>Net Zero</u> GHG emissions by 2025 through continued direct emissions reductions along with carbon offsets, such as reforestation and forest management

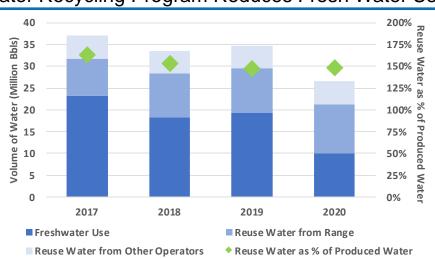
#### Health & Safety Achievements(b)

- 80% reduction in total number of Workforce Recordable Incidents over last three years
- 68% reduction in Workforce Total Recordable Incident Rate (TRIR) in 2020 versus 2019
- 64% reduction in total number of Preventable Vehicle Incidents in 2020 versus 2018 and 2019

#### Continued Success in Reducing Emissions Intensity



#### Water Recycling Program Reduces Fresh Water Use



# Governance & Social Responsibility

Range Is Committed to Strong Governance and Social Responsibility. Range Views These Objectives as Core to Delivering Long-Term Value for Shareholders.

#### **Board Governance**

- Average Director tenure of five years
  - Steve Gray appointed to the Board in October 2018
  - Margaret Dorman appointed to the Board in July 2019
- Diversity remains a priority, as Range seeks to achieve a combination of knowledge, experience and skills
- 33% of independent directors are women
- Independent Chairman
- Actively engage directly with shareholders

#### **Director Independence**







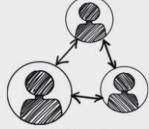






All directors are independent except the CEO

# **Social Responsibility** (ommunitu



\$442,000 to more than 350 non-profit and civic

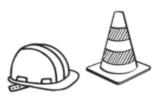
organizations across our core operating footprint



+700

employee hours volunteered at companysponsored events and community initiatives

Health and



#### Zero incidents

resulting in work restrictions or days away from work experienced by Range employee workforce in



3,179 hours of safety-related training completed by workforce over past

# **Executive Compensation Framework**

Continued Improvements to Compensation Framework Are Essential to Aligning Incentives with Evolving Shareholder Interests & Long-Term Strategic Initiatives

#### **Long-Term Equity Incentive Plan**

**Long-term incentives** focused on shareholder returns and prioritize balance sheet strength and environmental leadership.

- √ 60% Absolute Measures & 40% Time-Based RSU
- ✓ Greater than 85% of CEO compensation at-risk
- Removed absolute measures of production and reserve growth per debt-adjusted share in favor of:
  - Balance sheet leverage target of 1.5x
  - Emissions intensity target
- Relative TSR component has absolute performance modifier
- ✓ S&P 500 introduced as peer to better align performance
- Restricted stock modified to 3-year cliff vesting from 30% / 30% / 40%

#### **Annual Incentive Targets**

**Short-term incentives** focused on key financial and ESG framework targets, prioritizing returns, cost efficiencies and environmental, health & safety measures.

- Removed production and reserve growth per debtadjusted share in favor of returns-based metrics:
  - Added Return on Capital
  - Drilling Rate-of-Return (added in 2017)
- ✓ EHS component relies heavily on quantitative assessments including:
  - TRIR for employees and contractors
  - Preventable vehicle incidents
  - Spills and leak rates
  - Notices of violations
- Cash Unit Costs & Drilling & Completion Cost per Foot
- Reduced discretionary weighting and set rigorous targets

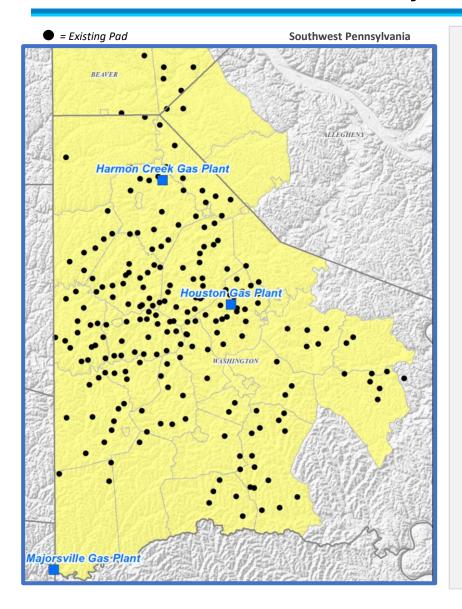
Changes to 2021 Incentive Plans Were Informed by the Board's Direct Outreach to Stakeholders, Including Holders of Over 65% of Shares Outstanding



# Appendix



# Multi-Decade Inventory of Capital Efficient Wells



# Range Has Delineated Its Acreage Position in Southwest Appalachia

- Since pioneering the Marcellus in 2004, Range has drilled across its SW Appalachian position
- More than 1,200 producing wells provide control data for new development activity
- Contiguous acreage provides for operational efficiencies and industry leading well costs:
  - Long-lateral development
  - Efficient water handling and sourcing
    - Use of electric fracturing fleet and existing infrastructure

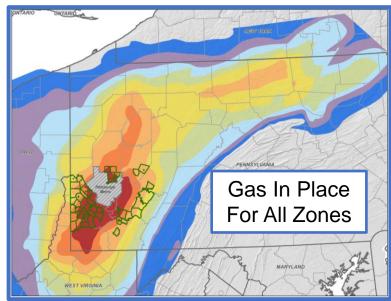
# Track Record of Returning to Existing Pads

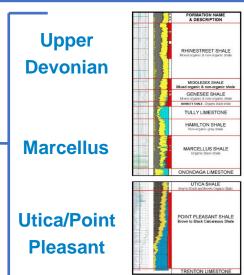
- Network of approximately 250 existing pads with an average of 5 producing wells versus capacity designed for an average of 20 wells
- Drives savings through use of existing surface infrastructure
- Over 60% of 2021 activity on existing pads, similar to prior years
- Well results after several years from returning to existing pads show no degradation in recoveries

# Appalachia Assets – Stacked Pay

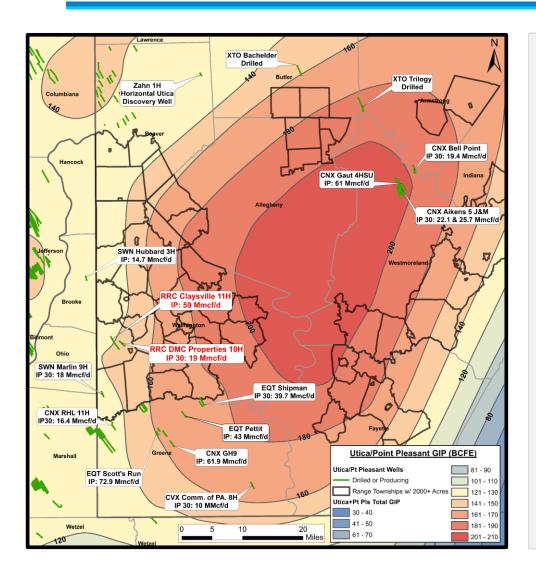
- ~1.5 million net effective acres<sup>(a)</sup> in PA leads to decades of drilling inventory
- Gas In Place analysis shows the greatest potential is in Southwest Pennsylvania
- Over 1,200 producing Marcellus wells demonstrate high quality, consistent results across Range's position
- Near-term activity led by <u>Core Marcellus</u> development in Southwest PA
- Range's third dry gas Utica well appears to be one of the best in the basin
- Adequate takeaway capacity in Southwest PA

Stacked Pay and Existing Pads Allow for Multiple Development Opportunities





# Significant Utica Resource



- ~400,000 net acres in SW PA prospective for Utica
- Range has three producing Utica wells in Washington County
- Range's third well appears to be one of the best dry gas Utica wells in the basin
- Continued improvement in well performance due to higher sand concentration and improved targeting

The Industry Continues to Delineate the Utica around Range's Acreage

# NGL Price Calculation Example

	% of RRC Barrel	Mont Belvieu (\$/gal)	1Q 2021E	2Q 2021E	3Q 2021E	4Q 2021E	Avg. 2021E
	53%	Ethane	\$0.24	\$0.24	\$0.25	\$0.25	\$0.24
	27%	Propane	\$0.89	\$0.79	\$0.76	\$0.76	\$0.80
	7%	Normal Butane	\$0.94	\$0.84	\$0.83	\$0.83	\$0.86
	4%	Isobutane	\$0.93	\$0.84	\$0.83	\$0.83	\$0.86
	9%	Natural Gasoline	\$1.33	\$1.38	\$1.35	\$1.33	\$1.35
	Range-Equivalent Mont Belvieu Barrel (\$/gal)		\$0.59	\$0.56	\$0.55	\$0.55	\$0.56
	Range-Equivalent Mont Belvieu Barrel (\$/bbl)  Range's Pre-Hedge Realization (\$/bbl)  Range's NGL Differential (\$/bbl)		\$24.83	~\$23.40	~\$23.00	~\$23.00	~\$23.55
•			\$26.35				
			\$1.52				

2021 Guidance Is the Range-Equivalent Mont Belvieu Barrel PLUS \$0.50 to \$2.00 per Barrel

# Southwest Appalachia Marcellus Modeling Data

#### **Super-Rich Area**

- ~110,000 Net Acres
- EUR / 1,000 ft. = 2.68 Bcfe
- D&C Cost / ft. = \$657

#### **Wet Area**

- ~240,000 Net Acres
- EUR / 1,000 ft. = 3.05 Bcfe
- D&C Cost / ft. = \$621

#### **Dry Area**

- ~110,000 Net Acres
- EUR / 1,000 ft. = 2.41 Bcfe
- D&C Cost / ft. = \$549

#### **Gross Estimated Cumulative Recoveries by Year**

Year	Condensate (Mbbls)	Residue (Mmcf)	NGL (Mbbls)
1	87	1,158	208
2	122	1,962	353
3	146	2,655	477
5	179	3,817	685
10	230	5,965	1,067
20	291	8,744	1,557
EUR	360	11,973	2,111

Year	Condensate (Mbbls)	Residue (Mmcf)	NGL (Mbbls)
1	29	1,763	306
2	43	2,934	509
3	52	3,882	674
5	63	5,382	934
10	73	7,969	1,383
20	78	11,151	1,935
EUR	80	14,714	2,554

Year	Residue (Mmcf)
1	4,166
2	6,334
3	7,928
5	10,288
10	14,096
20	18,576
EUR	24,135



# Macro Outlook Natural Gas & NGL



## Natural Gas Demand Growth Outlook

#### 2021-25 Demand Outlook

- Total demand growth of +18 Bcf/d through 2025 from LNG and Mexican exports, industrial and electric power demand growth
- LNG feedgas capacity increased to over 11 Bcf/d in 2020, with further growth planned in 2021
- Second Wave LNG Projects could add another +7 Bcf/d of exports by 2025
- Continued coal (currently ~19% of power stack) and nuclear retirements (~20% of power stack) present upside to this demand outlook

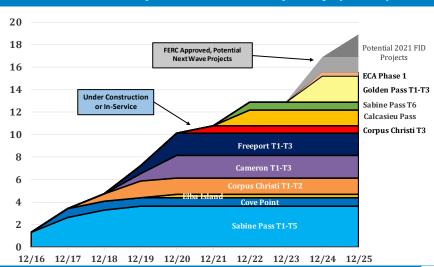
#### **U.S. LNG Export Demand Outlook**

- Second Wave U.S. LNG Projects of ~5 Bcf/d already under-construction. Further +2-4 Bcf/d likely to FID in 2021-22
- Over 30 Bcf/d of Second-Wave LNG projects have been proposed
- Range forecasts U.S. LNG feedgas capacity to reach ~14 Bcf/d in 2022 and ~19 Bcf/d by 2025

# U.S. Gas Demand Growth Outlook (Bcf/d) 18 16 14 12 10 8 6 4 2 0 2016-20 2021-25

#### **U.S. LNG Export Terminal Capacity (Bcf/d)**

■ R+C ■ Other ■ Industrial ■ Electric Power ■ Mexico Exports ■ LNG Exports



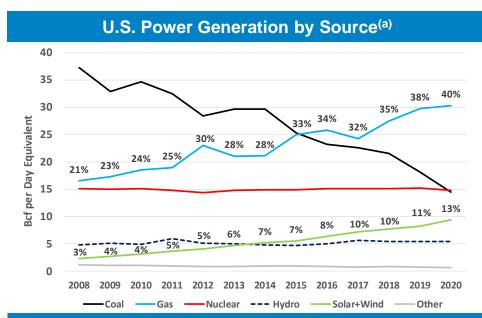
## Natural Gas – 40% of U.S. Generation Mix

#### **Growing Market Share in Power Gen.**

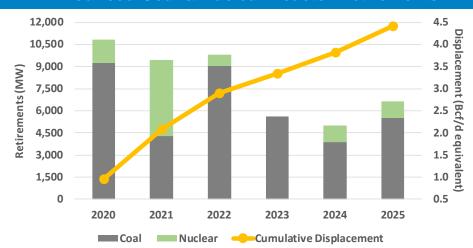
 Gas power demand grew by 12 Bcf/d from 2010-2020, while coal declined 20 Bcf/d<sup>(a)</sup> and renewables grew 6 Bcf/d<sup>(a)</sup>

#### **Market Share Growth Should Continue**

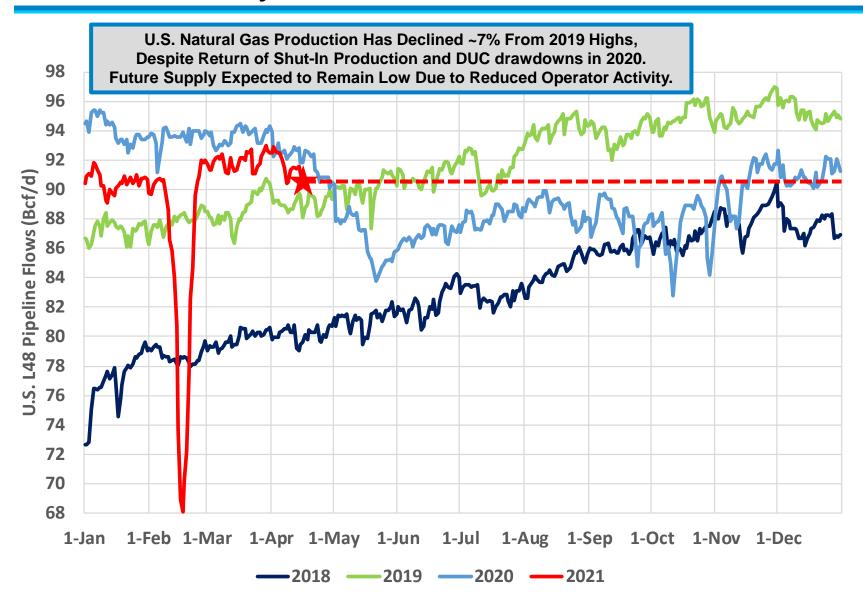
- Approximately 15 Bcf/d of coal generation remains to be displaced, or ~19% of U.S.
   Power Generation Mix
- 66 GW of coal plant capacity retired from 2013-2019, and another 38 GW of coal plant retirements have already been announced for 2020-2025
  - More retirement announcements expected to occur in coming months/years
- Planned nuclear retirements (~10 GW of announced retirements for 2020-2025) also remove large base-load of power generation
- New gas-fired reciprocating engines being added to balance grid instability issues created by renewables



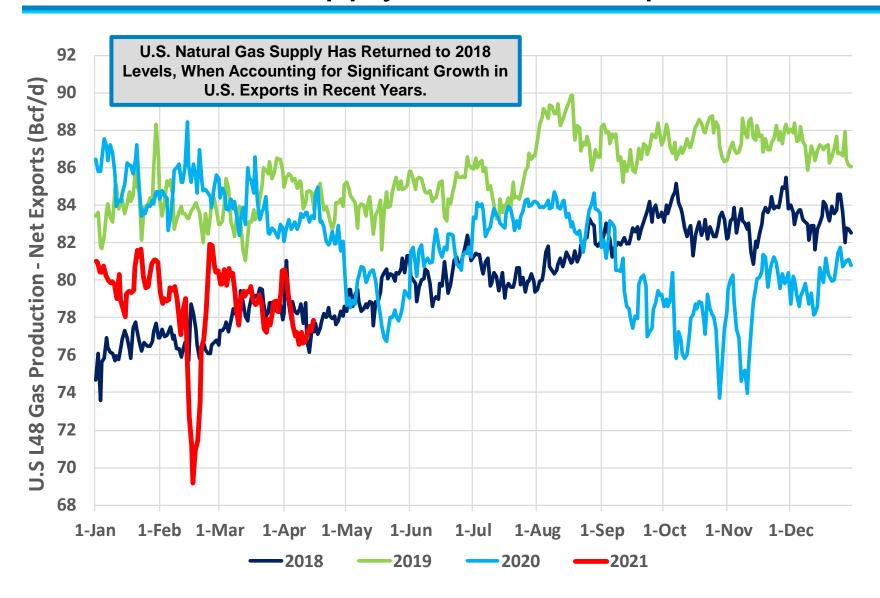




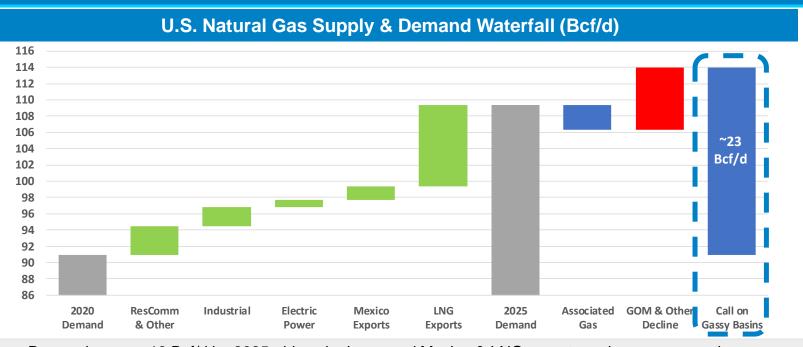
# Lower 48 Dry Gas Production Has Declined



# Natural Gas Supply Less Net Exports



## Higher Prices Required to Meet Demand Growth



- Demand grows >18 Bcf/d by 2025, driven by increased Mexico & LNG exports and power generation
- Collapse in oil-basin activity in 2020 and industry focus on capital discipline significantly reduces outlook for associated gas growth versus pre-2020 expectations
- Haynesville grows ~4.5 Bcf/d by 2025, more than offset by declines in offshore and legacy production
- Result is a call on Appalachia natural gas of an additional +18 Bcf/d to meet new demand
- Even if oil basin activity increases with rising oil prices, significant growth is still needed from gassy basins to meet future demand.
- Higher prices will be needed for Appalachia supply growth to meet demand
  - Investor pressure for free cash flow limits public operator spending at current strip pricing
  - Capital markets not open for most producers to finance outspends
  - Lack of exit strategy and incremental funding pressures PE-backed private operators to preserve liquidity / generate free cash

### NGL Macro Outlook

#### **NGL Demand Growth**

- IEA forecasts LPG (propane and butane) and ethane to be the fastest growing global oil products over medium and long term
- IEA projects LPG growth in residential cooking use, reducing global emissions versus current use of biomass for cooking
- IEA forecasts Indian LPG demand to grow >50%
   2019-2030 as access to clean cooking grows
- In 2021, Asian PDH plants are scheduled to start up with a combined capacity of 125 MBPD of propane demand, in addition to another 55 MMPD of LPG demand from new Asian ethylene capacity

#### **U.S. Export Bottleneck Relieved**

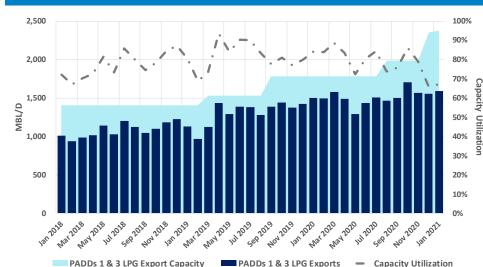
- 2020 export capacity increased by ~500 MBPD versus EIA field production of LPG (C3, NC4 and iC4) of 2,600 MBPD in January 2021
- U.S. waterborne export capacity increases equivalent to ~19% of U.S. LPG Gas Plant supply, which should tighten balances going forward
- Local Northeast propane differentials have improved since start up of Mariner East 2

EIA Forecasts C3+ Supply to Average ~4% Lower in 2021 Versus 2020 Highs, Following Reduction in Industry Activity

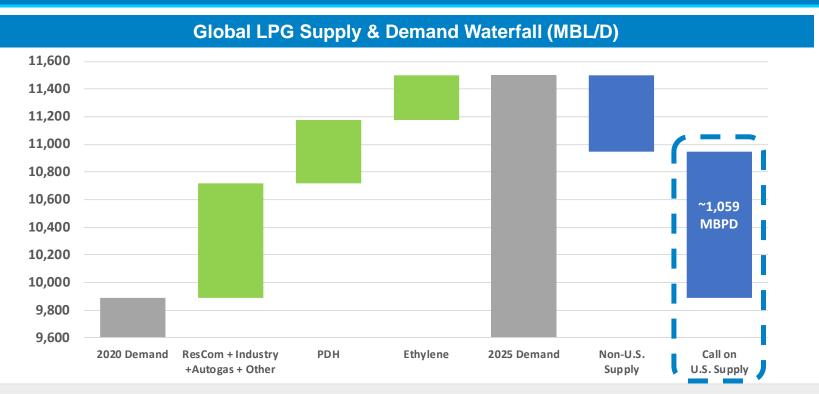
# Change in Global Oil Product Demand by Scenario Other Products Other Products

Source: IEA WEO 2020 (STEPS = Stated Policies Scenario, SDS = Sustainable Development Scenario)

#### Ample Capacity for Additional U.S. LPG Exports



# LPG Demand Absorbs Growing U.S. Exports



- U.S. LPG Export Capacity expanded ~500 MBL/D by end of 2020
- Global LPG demand grew ~3% 2015-20. Forecast assumes demand grows at 5-year CAGR of 3%. New PDH/ethylene projects drive ~780 MBL/D of demand growth.
- ResComm (~50% of demand) is steadily growing due to continued adoption rates in China, India, Indonesia and other regions without access to electricity
- International LPG supply is impacted by OPEC+ production cuts, lower refinery run rates/closures (~30% of global LPG supply comes from refining), and a slowdown in new LNG projects
- Relative economics support use of LPG over naphtha for international steam crackers. In an over-supply case, converting just 10% of global naphtha ethylene cracking fleet would absorb a further 600 MBL/D of LPG.
- Call on U.S. Supply is 1,059 MBL/D 2020-25, versus consultant supply growth forecasts of ~213 MBL/D



# **Financial Detail**

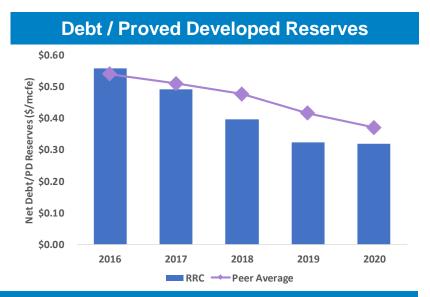


# 2021 Annual Guidance

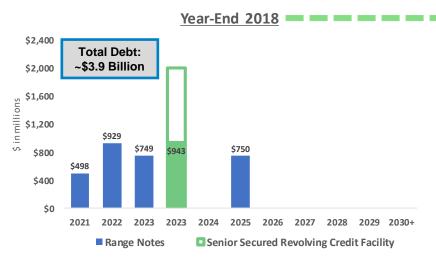
	Full-Year 2021
	Guidance
Production per Day	~2.15 Bcfe
Capital Expenditures	
Drilling & Completion	\$400 Million
Land & Other	\$25 Million
Cash Expense Guidance	
Direct Operating Expense per mcfe	\$0.09 - \$0.11
TGP&C Expense per mcfe	\$1.35 - \$1.40
Production Tax Expense per mcfe	\$0.02 - \$0.04
G&A Expense per mcfe	\$0.15 - \$0.16
Exploration Expense	\$20 - \$28 million
Interest Expense per mcfe	\$0.26 - \$0.28
DD&A Expense per mcfe	\$0.47 - \$0.50
Net Brokered Marketing Expense	\$2 - \$10 million
Pricing Guidance	
Natural Gas Differential to NYMEX	(\$0.30) to (\$0.40)
Natural Gas Liquids (a)	\$0.50 to \$2.00 per barrel
Oil/Condensate Differential to WTI	(\$7.00) - (\$9.00)

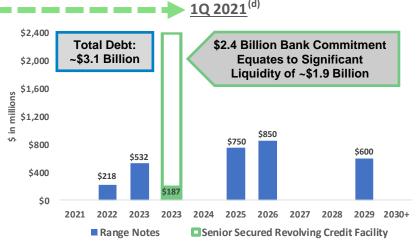
# Well-Structured, Resilient Balance Sheet

- \$3 billion elected borrowing base reaffirmed in March 2021
- \$2.4 billion elected commitment
- Ample cushion on financial covenants
  - Interest coverage ratio<sup>(a)</sup> covenant of at least 2.5x
  - Current ratio<sup>(b)</sup> covenant of at least 1.0x
  - Asset coverage test<sup>(c)</sup> covenant of at least 1.5x
  - No Debt-to-EBITDA covenant



#### **Successfully Reduced Debt & Improved Maturity Profile**





# Natural Gas & Oil/Condensate Hedges

As of 4/16/21	Time Period	Daily Volumes Hedged	Average Hedge Prices
Natural Gas <sup>1</sup> (Henry Hub) \$/Mmbtu	Apr-Oct21 Collars  Apr-Dec21 3-Way Collars  Apr-Dec21 Swaps	360,000 240,000 550,000	\$2.52 x \$3.00 \$1.99 / \$2.33 x \$2.60 \$2.76
Oil/Condensate <sup>2</sup> (WTI) \$/BbI	2Q 2021 Swaps 3Q 2021 Swaps 4Q 2021 Swaps 2022 Swaps	6,500 6,500 6,000 1,366	\$45.84 \$55.10 \$55.25 \$56.98

<sup>1)</sup> Range sold 2022 natural gas call swaptions of 280,000 Mmbtu/d at an average strike price of \$2.81 per Mmbtu.

<sup>2)</sup> Range sold 2022 WTI call swaptions of 1,000 Bbls/d at an average strike price of \$54 per bbl.

# NGL Hedges

As of 4/16/21	Time Period	Barrels per Day Hedged	Average Hedge Prices
C3 Propane	2Q 2021 Collars	5,000	\$0.50 x \$0.60/gal
	2Q 2021 Swaps	6,319	\$0.683/gal
	3Q 2021 Swaps	2,000	\$0.708/gal
nC4 Butane	2Q 2021 Swaps	2,000	\$0.821/gal
C5 Natural Gasoline	2Q 2021 Swaps	5,000	\$1.001/gal
	3Q 2021 Swaps	2,668	\$1.129/gal

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