CHENIERE ENERGY, INC.

National Perspectives on Key Technical Challenges

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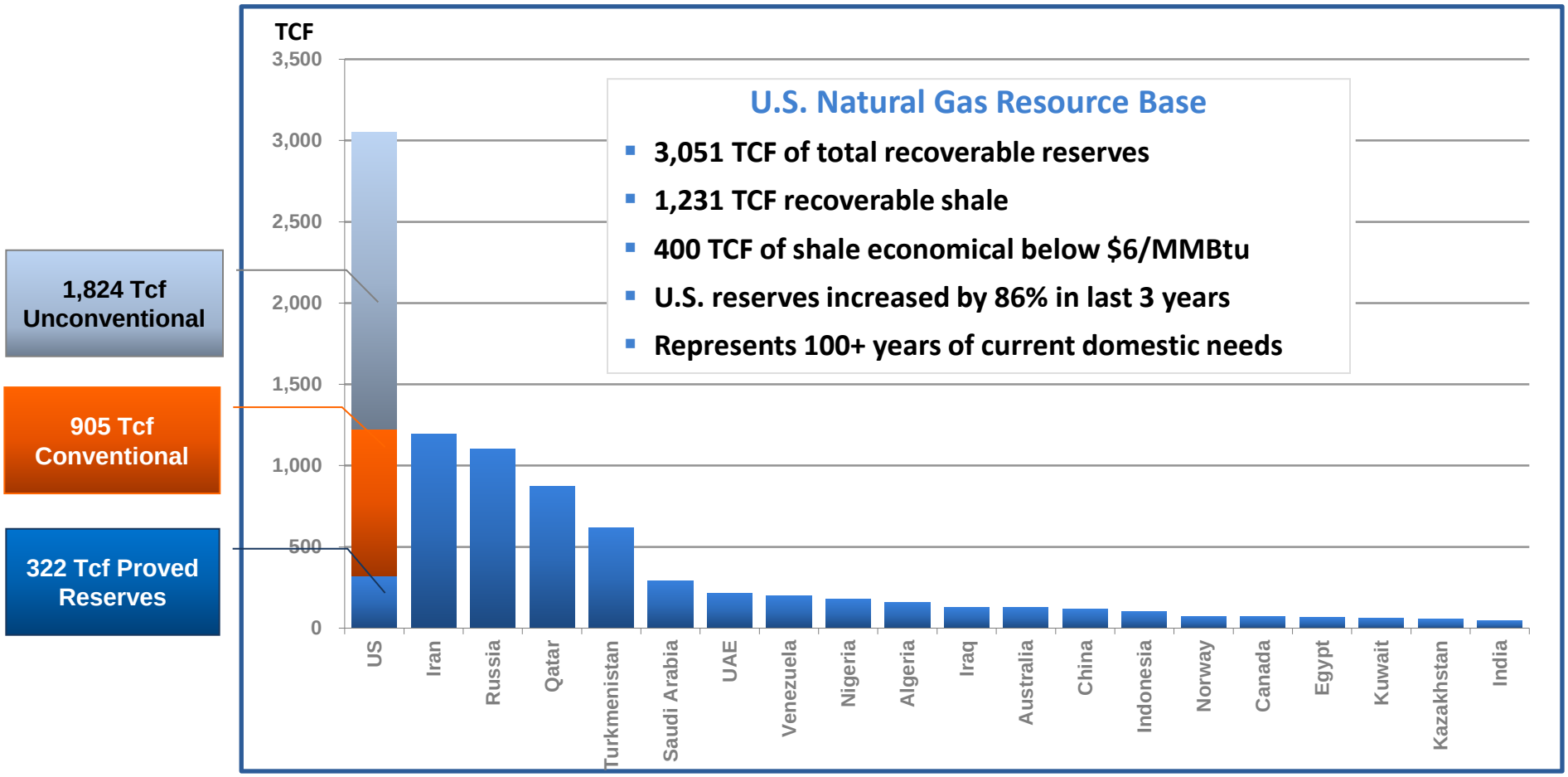
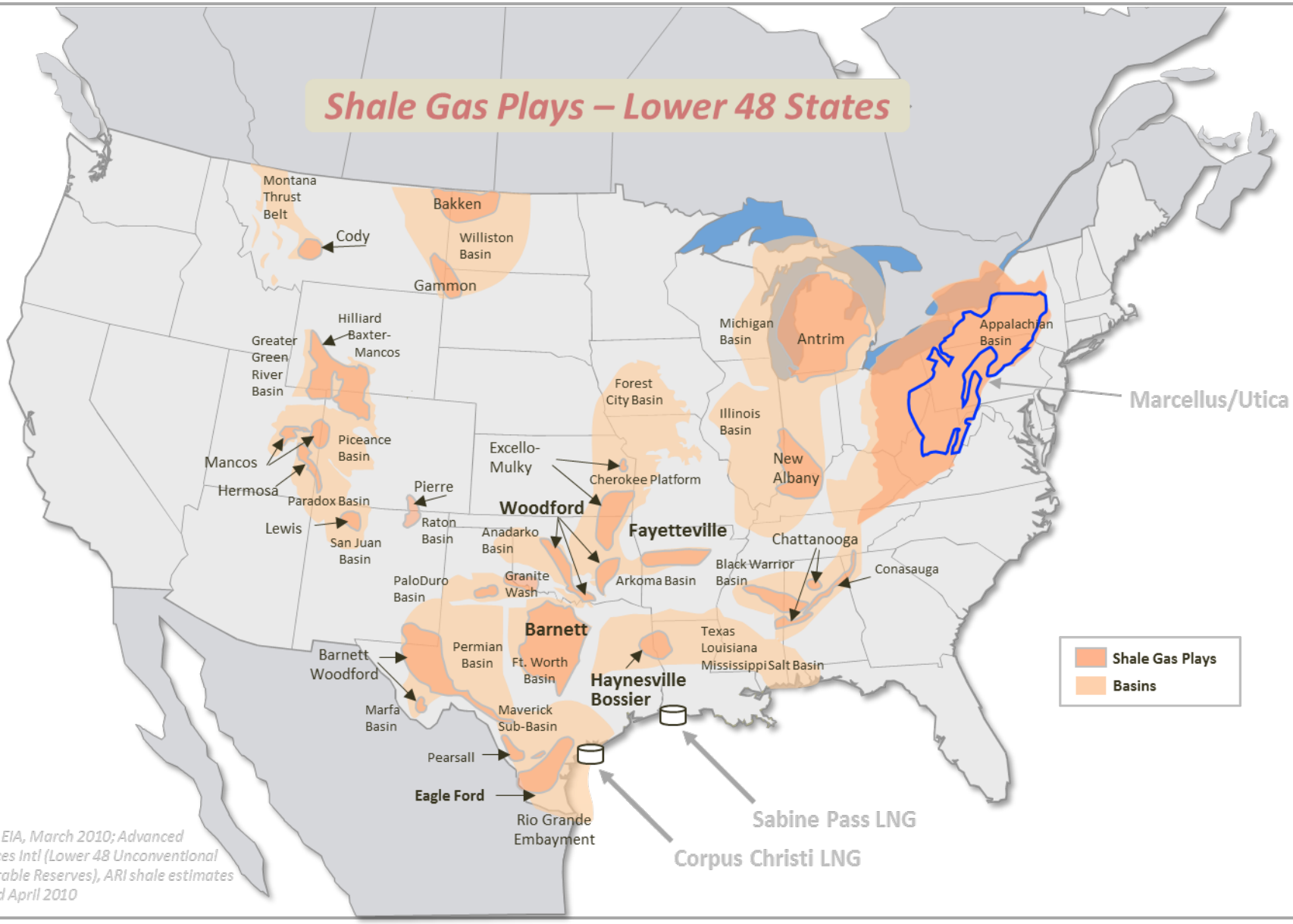
Global Natural Gas Reserves



Unconventional gas is abundant globally, but only the U.S. has the technical capability to develop at present

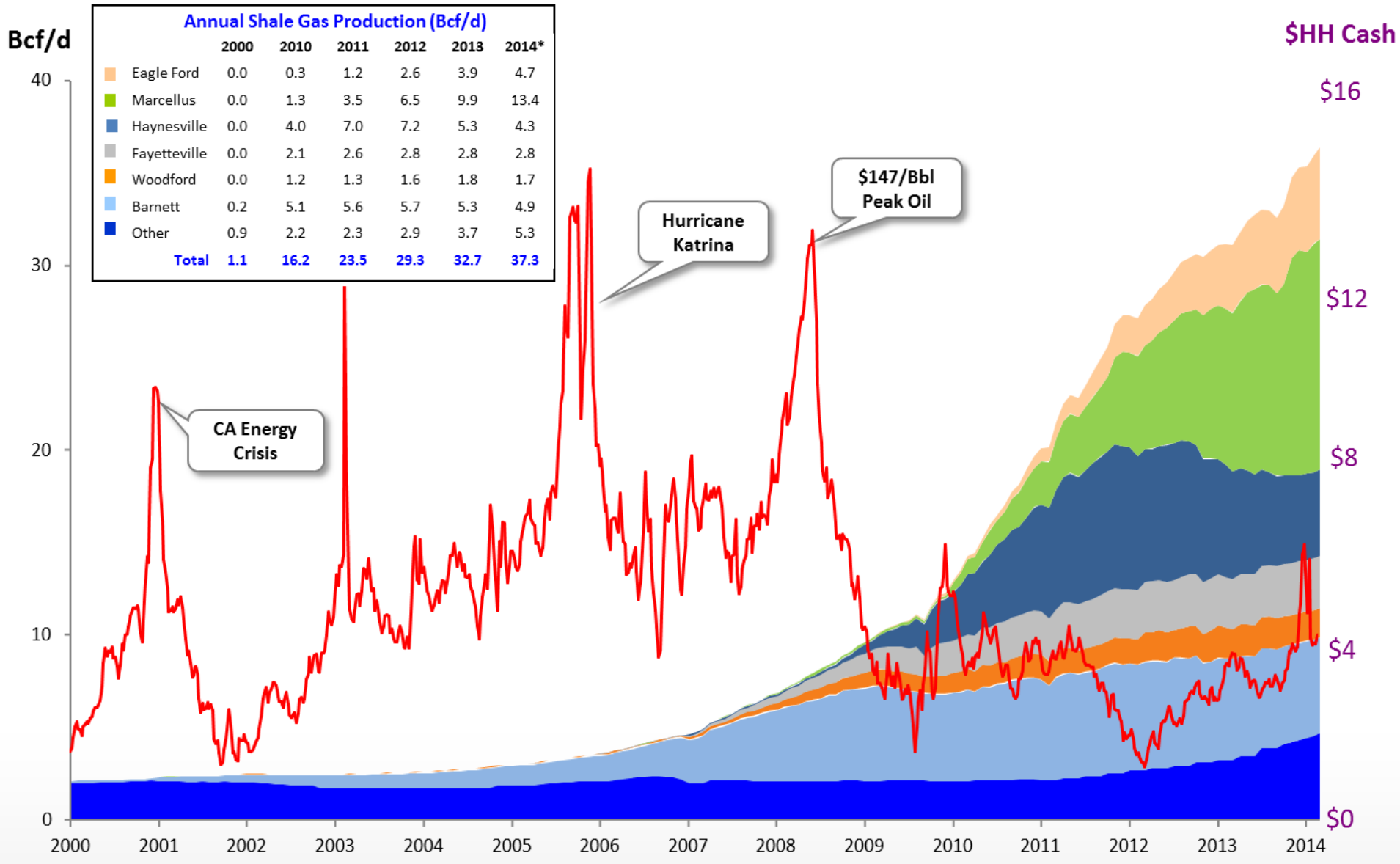
Source: 2014 BP Statistical Review (Global Reserves); Advanced Resources International, US Natural Gas Resources & Productive Capacity, August 2013 (US Resource Base); MIT, The Future of Natural Gas, 2009 (shales economic below $6)

Extensive Shale Resource Base



Source: EIA, March 2010; Advanced Resources Intl (Lower 48 Unconventional Recoverable Reserves), ARI shale estimates updated April 2010

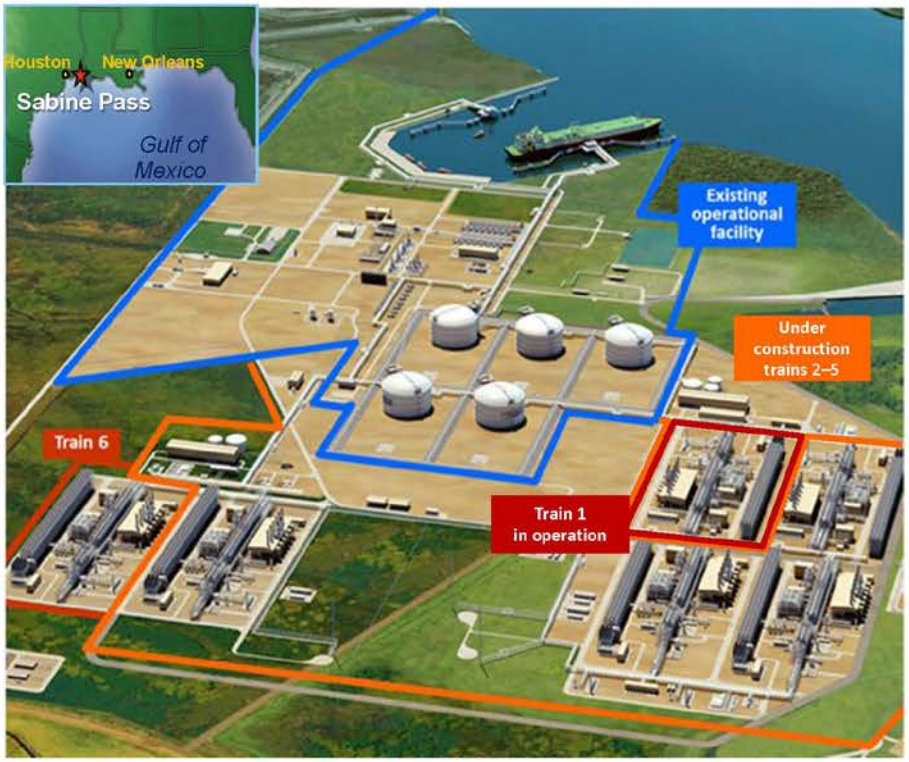
U.S. Shale Production & Henry Hub Price



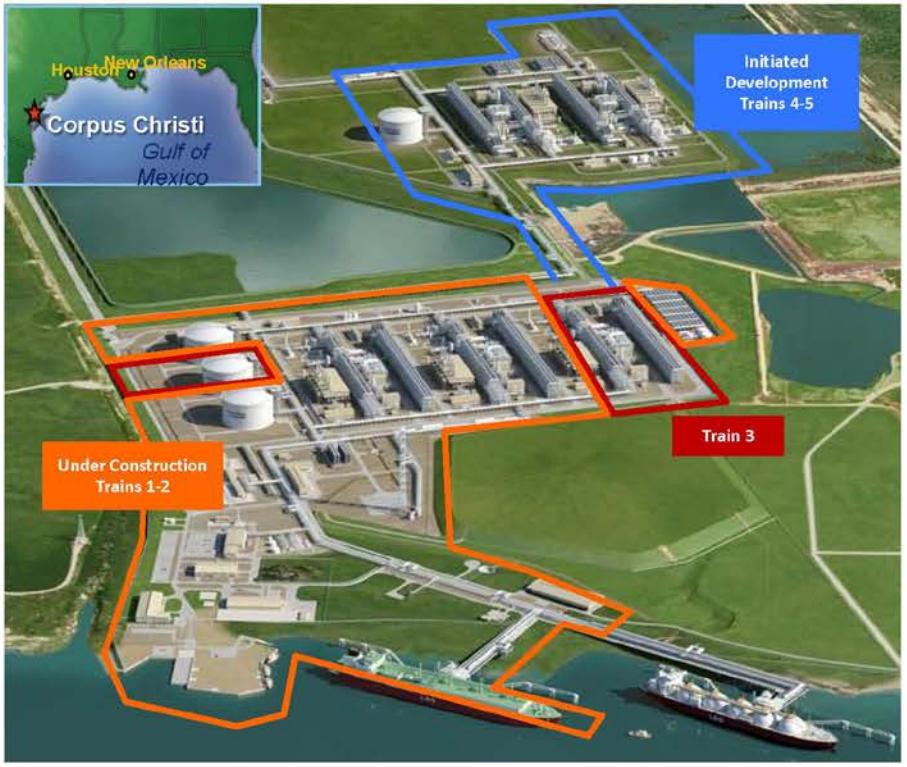
Market Response to Abundant Supply…

Building a world class LNG Platform along the US Gulf Coast…

SPL – 22.5 MTA (3.2 Bcf/d) of liquefaction capacity in Louisiana



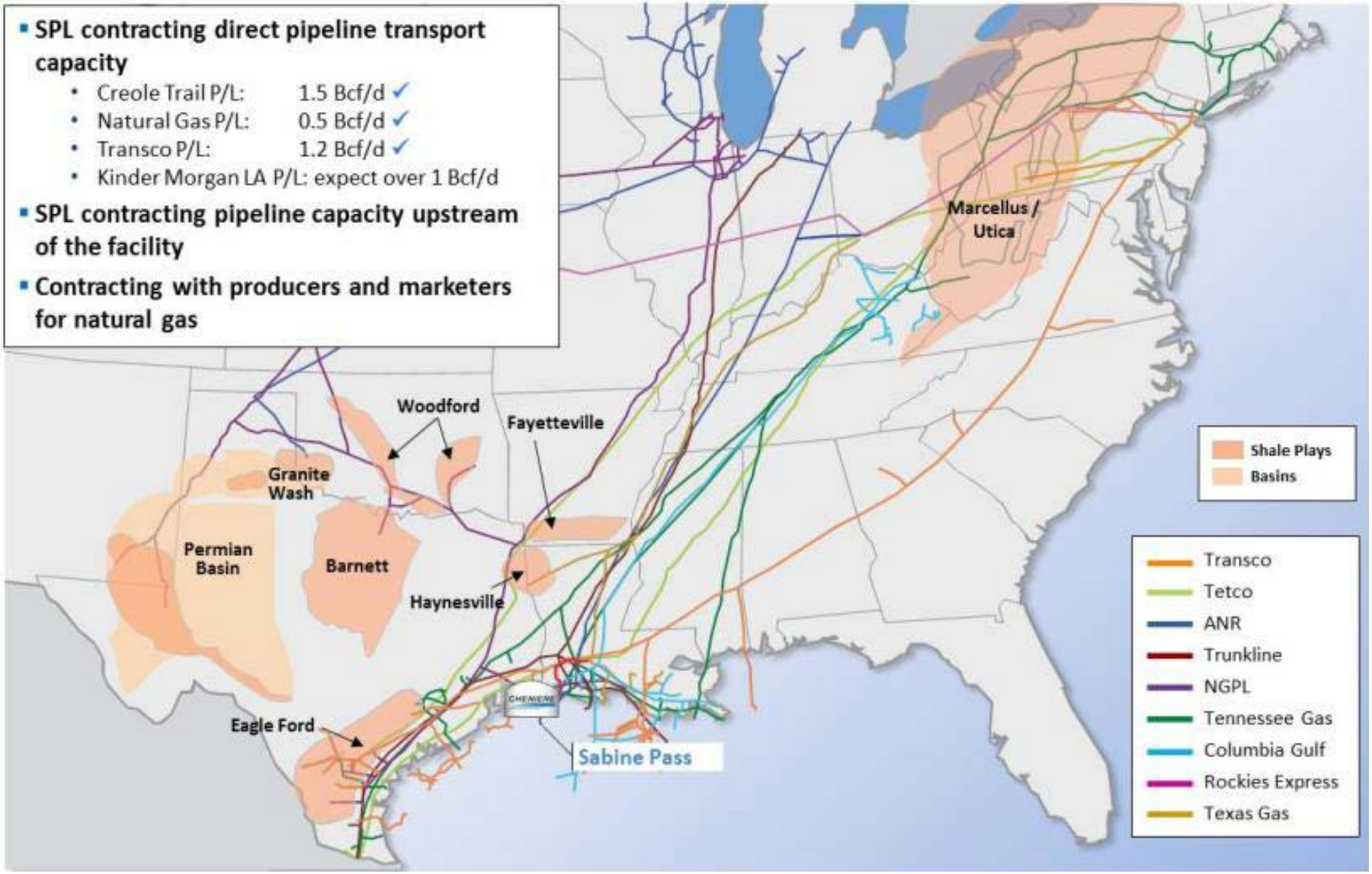
CCL – 9 MTA (1.3 Bcf/d) of liquefaction capacity in Texas



Other demand including Mexico exports, pet-chem expansions, power conversions, etc.

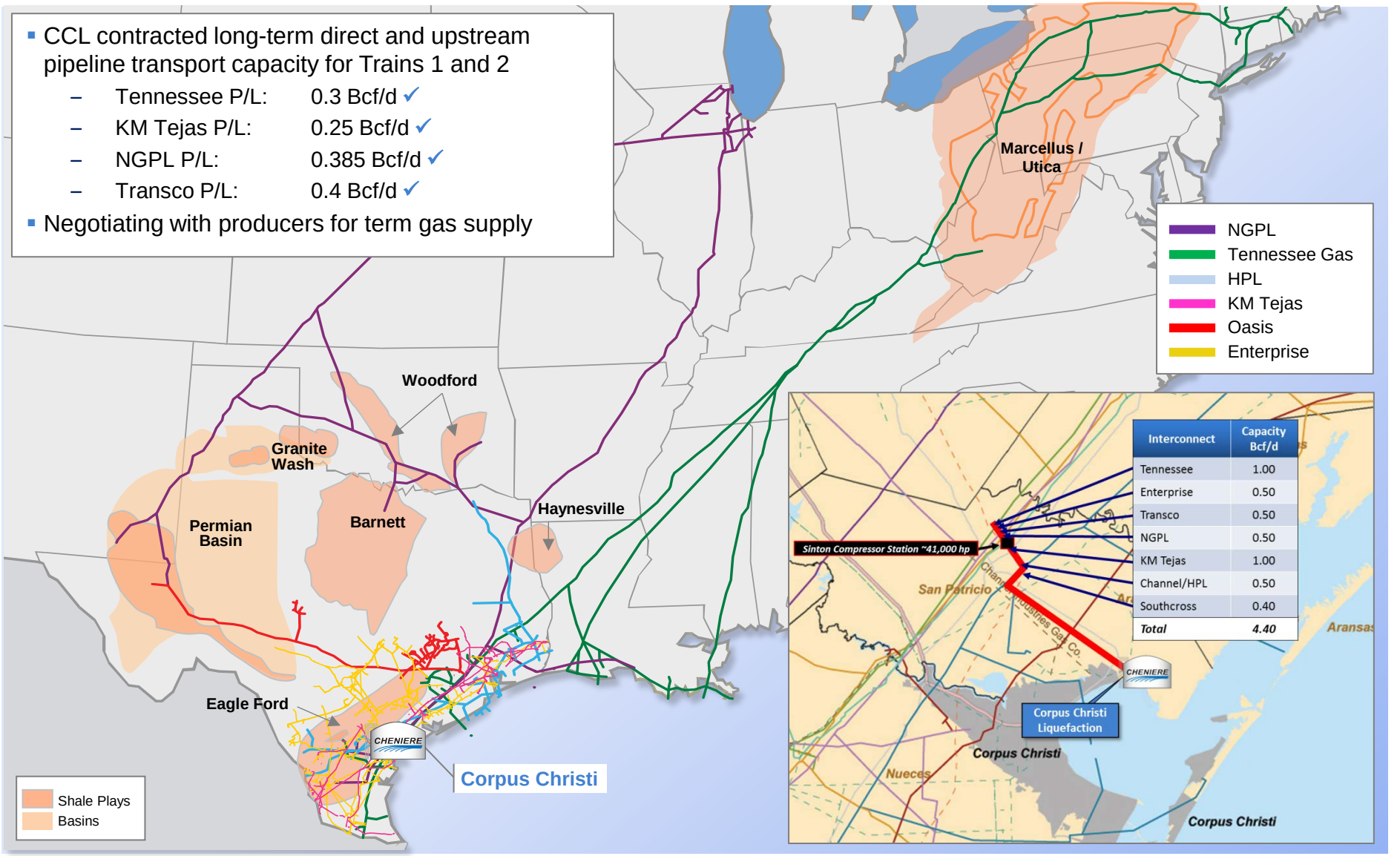
Gas Procurement: Sabine Pass Terminal

- **SPL contracting direct pipeline transport capacity**
  - Creole Trail P/L: 1.5 Bcf/d ✓
  - Natural Gas P/L: 0.5 Bcf/d ✓
  - Transco P/L: 1.2 Bcf/d ✓
  - Kinder Morgan LA P/L: expect over 1 Bcf/d
- **SPL contracting pipeline capacity upstream of the facility**
- **Contracting with producers and marketers for natural gas**



Gas Procurement: Corpus Christi Terminal

- CCL contracted long-term direct and upstream pipeline transport capacity for Trains 1 and 2
  - Tennessee P/L: 0.3 Bcf/d ✓
  - KM Tejas P/L: 0.25 Bcf/d ✓
  - NGPL P/L: 0.385 Bcf/d ✓
  - Transco P/L: 0.4 Bcf/d ✓
- Negotiating with producers for term gas supply



Technical Challenges and Opportunities

Respond to the evolving market…

1. Maintaining and demanding more from legacy assets

2. Developing new infrastructure in increasingly challenging environment

3. Modernizing the regulatory framework

Maintaining and Demanding More from Legacy Assets

Guiding Principles

Action Plan

1. **Apply Risk Management beyond High Consequence Areas (HCAs)**
2. **Raise the Standards for Corrosion Anomaly Management**
3. **Demonstrate Fitness for Service on Pre-Regulation Pipelines**
4. Shorten Pipeline Isolation and Response Time to 1 Hour
5. **Improve Integrity Management Communication and Data**
6. Implement the Pipelines and Informed Planning Alliance (PIPA) Guidance
7. **Evaluate, Refine and Improve Threat Assessment and Mitigation**
8. Implement Management Systems across INGAA Members
9. Provide Forums for Stakeholder Engagement and Emergency Officials

Developing New Infrastructure

Navigating the Permitting Process

- Improved environmental impact analysis
- Advanced routing and site selection

Minimizing Environmental Impact

- Enhanced excavation and installation techniques
- Design for methane emissions reductions
- Horsepower unit selection and design
- Increased horsepower efficiency

Public Education and Outreach

- Demonstrating the need and the benefits
- Ensuring safety and environmental responsibility

Modernizing the Regulatory Framework

“Gas Mega Rule” – key focus areas

1. Moderate Consequence Areas (MCA)
2. Improving Integrity Management Practices
3. Repair Criteria and Corrosion Control
4. Records
5. MAOP Verification and Pressure Testing

LNG Regulatory Framework

1. Appropriateness of a Process Safety Management approach
2. Alignment of mechanical integrity standards including ASME
3. Adoption of a risk based approach for system integrity
4. Identifying key differences between pipeline and LNG terminals to ensure appropriate application
5. Advancing management systems and management of change

Key Challenges: Pipeline Integrity Management & Integrity Verification

MAOP Reconfirmation

- Develop practicable ECA process
- Advance and leverage modern ILI technology

Anomaly Detection & Characterization

- Identify and characterize cracks, continuously improve metal loss characterization
- Develop processes for data integration, risk assessment and risk modeling

Pipe Material Properties

- Identify properties needed for integrity mgmt; reduce need for destructive testing
- Develop pipe characterization technology (OD, WT, Gr, LS)

Underground Gas Storage

- Extend risk and integrity assessment methods to underground storage
- Measure effectiveness of safety systems
- Evaluate design and integrity of leak barriers

Methane emissions detection - quantification - reduction

- Develop and prove technologies that eliminate need for blowdowns
- Evaluate effectiveness and advance emissions mitigation technologies

Critical Role of Academia

Experience demonstrates value of academic engagement

- Deep knowledge in key technical areas gained from broad array of industrial applications
- Demonstrated experience in experimental methods and data analyses
- Capacity and experience to conduct many tests or experiments for more complex research
- Development of the next generation of researchers and technical leaders
- “Pipeline” for ongoing evolution and advancement of the pipeline industry