



LNG BY RAIL  
TASK FORCE

**The PHMSA / FRA LNG by Rail Task Force used a four-part strategy to approach the transportation risk of LNG by rail.**

- 1. Know the risk.**
- 2. Predict the risk.**
- 3. Reduce the risk.**
- 4. Prepare for the risk.**



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# Know the risk.

- Empirical Review of international LNG Rail Transportation
- LNG Loading / Unloading Safety Evaluation
- Quantitative Risk Assessment of LNG Transportation
- Full-Scale Impact Testing on DOT-113
- LNG UN T75 Portable Tank Fire-Testing



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# Predict the risk.

- **Evaluate Likely Number of Punctures and Derailment Simulation Models**
- **Develop Worst-Case Scenario Model**
- **Safety / Security Route Risk Assessment**
- **Train Energy and Dynamics Simulator (TEDS)**
- **Modal Conversion between LNG by Truck and Rail**



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# Reduce the risk.

- **Re-Evaluate Costs and Benefits of ECP Brakes**
- **Evaluation of Train Operational Controls**
- **Automated Track Inspection**



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# Prepare for the risk.

- **Validate Emergency Responder Opinions and Needs**
- **Develop LNG Educational and Outreach Plan**