Global LNG supply under Shamal disruptions

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LNG Supply Chain

The impact

- Delays in cargo loading (days to weeks)
- Changes the pre-planned vessel routing schedule
- Costs penalty for delay, additional inventory and boiled-off gas (BOG) ≈ 0.2%/day

Conceptual approach

1) No Shamal disruption \( \Rightarrow \) deterministic model

2) Shamal disruption \( \xi \) \( \Rightarrow \) stochastic model

Optimal shipping schedule

Historical data on Shamal *(1990-1999)*

Inventory and Production schedule ('with Shamal' vs 'without Shamal')

Conclusions

- Minimizes expected delays of LNG cargo loading
- No changes on pre-planned vessel routing schedule
- Minimizes expected penalty cost for shipping delay
- Ensures stable expected profit and production level

References