

# *Decarbonization*

## *Another challenge for Long Term Contracts*

ENERGETIKA XXI: economy, policy, ecology

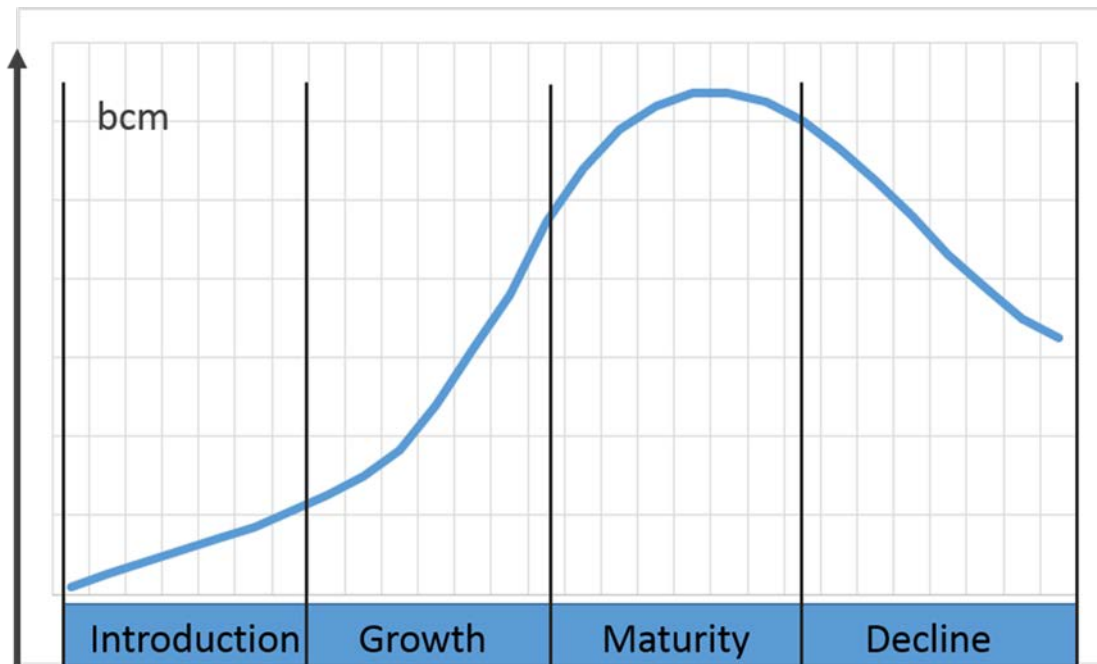
Challenges of De-carbonization and recent price developments for natural gas in Eurasia

St. Petersburg, 9-10th of November 2017

# Initial Function of Long Term Contracts

- Allow national gas markets to develop beyond indigenous production
- Safeguard importers commitment to infrastructure
- Provide producers with access to foreign markets
- Provide basis for producers` investment finance and importers` return on assets
- Provide sustained competitiveness for market development
- Maximization of obtainable market value for gas
- Provide congruence of durations in sales and purchase
- Establish effective and efficient administration and pricing process
- Provide contractual instruments for adjustments

# LTC`s Experience Different Phases in Life Cycles of Gas Industries



- Demand, indigenous production and import represent separate interdependent cycles
- LTC`s need to adapt to changing environment
- Contract designs demonstrated their robustness & reliability

# LTC`s in the Period of Growth

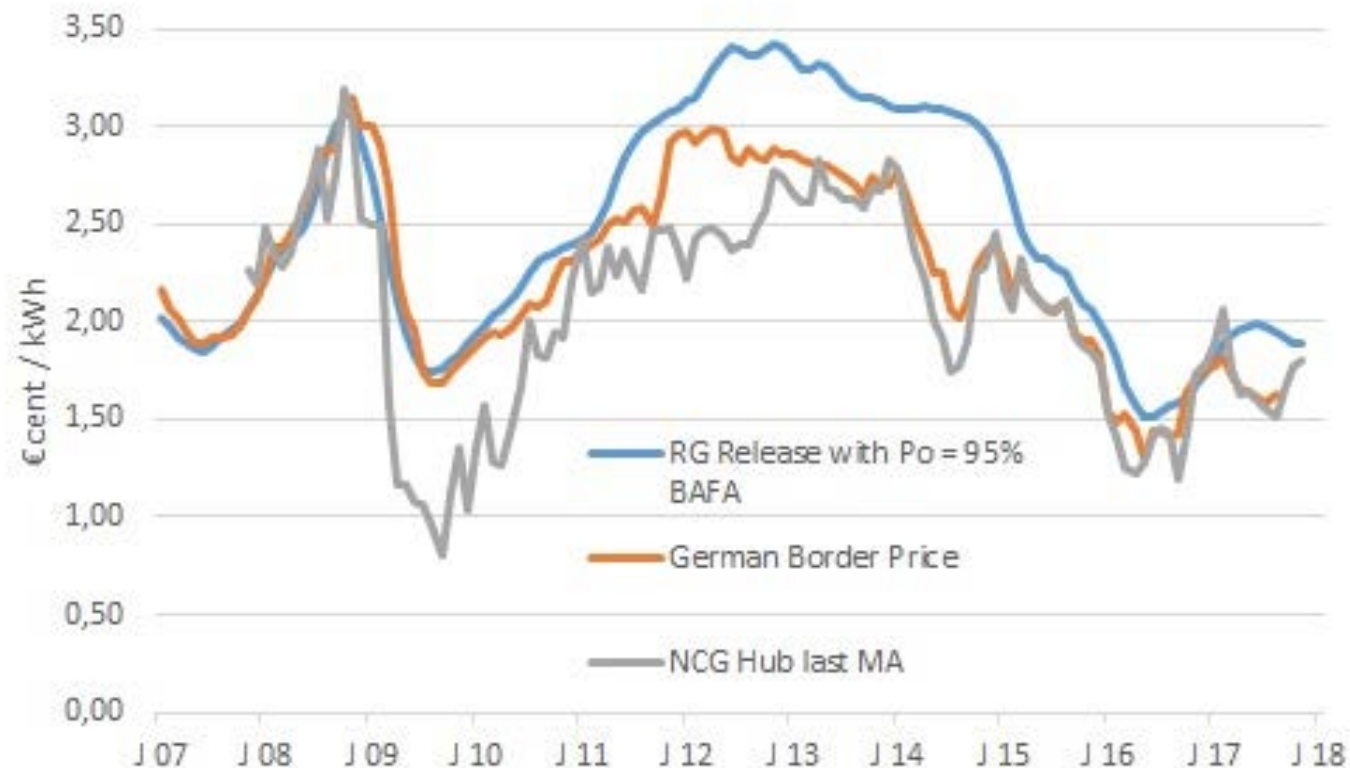
- New approach for supply contracts supported turn to natural gas
- Long term commitments needed (upstream and downstream)
- Consistency of planning from wellhead to burner tip
- Regular pricing mechanism for continuous competitiveness
- Price revisions for sustainable contract relation
- Volume adjustment by additional contracts
- Product adjustment not on agenda
- Revisions mainly limited to price level adjustments (calculated market value)

# LTC`s in the Period of Maturity

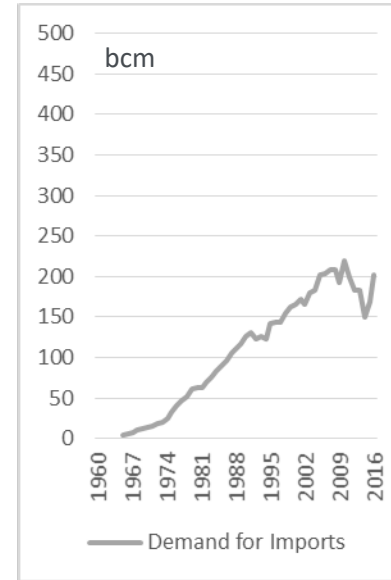
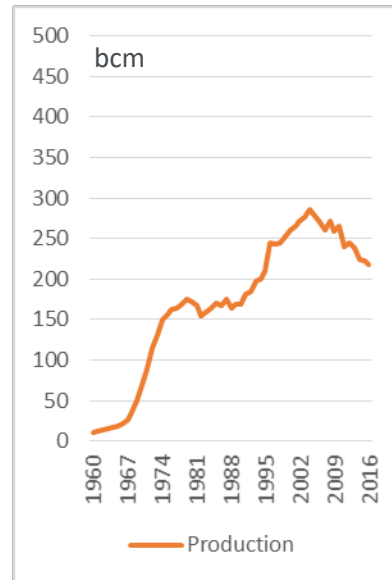
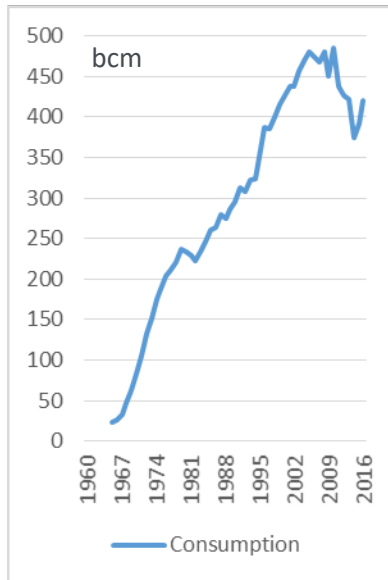
- **Liberalization changed LTC`s environment of operation**
  - Access to markets, customers & infrastructure
  - Regulatory oversight, unbundling, market model
- **Gas importers changed their business models**
  - Capitalization of infrastructure assets
  - Reduction of provided services
- **Financial crisis and oversupply accelerated trend to hub pricing**
  - Import volumes no longer for a guaranteed market
  - Disruption of established pricing
  - Away from commitments (SoS, OMV, risk sharing)
  - Focus on hub trading and requests for discounts
  - Gas import sorted out to energy companies` "bad banks"
- **LTC`s core instruments not sufficient to regain initial bargain`s balance**
  - Revisions only price related, no contractual access to other aspects
  - Contracts may need changed product design
  - Supplementary direct sales necessary

# German Borderprice – Effects of Revisions

Comparison Traditional Oil Index Level vs. Border Price Statistic & Hub (Germany)



# LTC`s in the Period of Decline ?



- Status quo : Even with declining demand WE imports will rise
- But what if demand declines faster than indigenous production?

# From Climate Policy to De-Carbonization

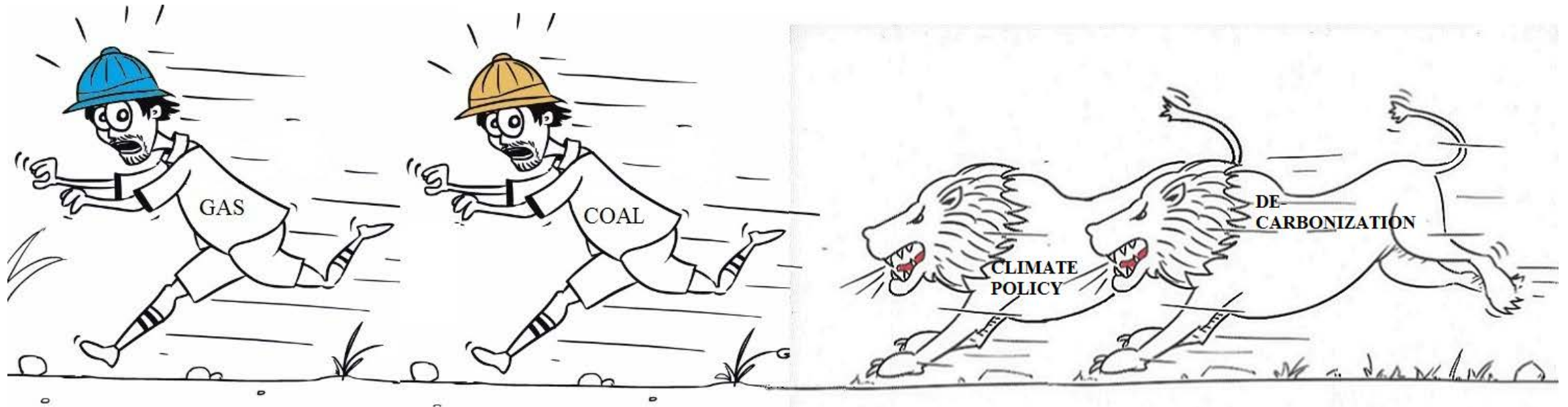
- **1990** EU agreement to stabilize emissions at 1990 levels by 2000
- **1997** 8% reduction target until 2012 for Kyoto I
- **2007** 20-20-20 target by 2020 for Kyoto II
- **2014** 40% target for 2030 agreed by European Council
- **2015** Paris asks for zero emissions by 2045-2060 to achieve 2.0° C/  
1.5 ° C target  
without CCS zero emissions by 2040



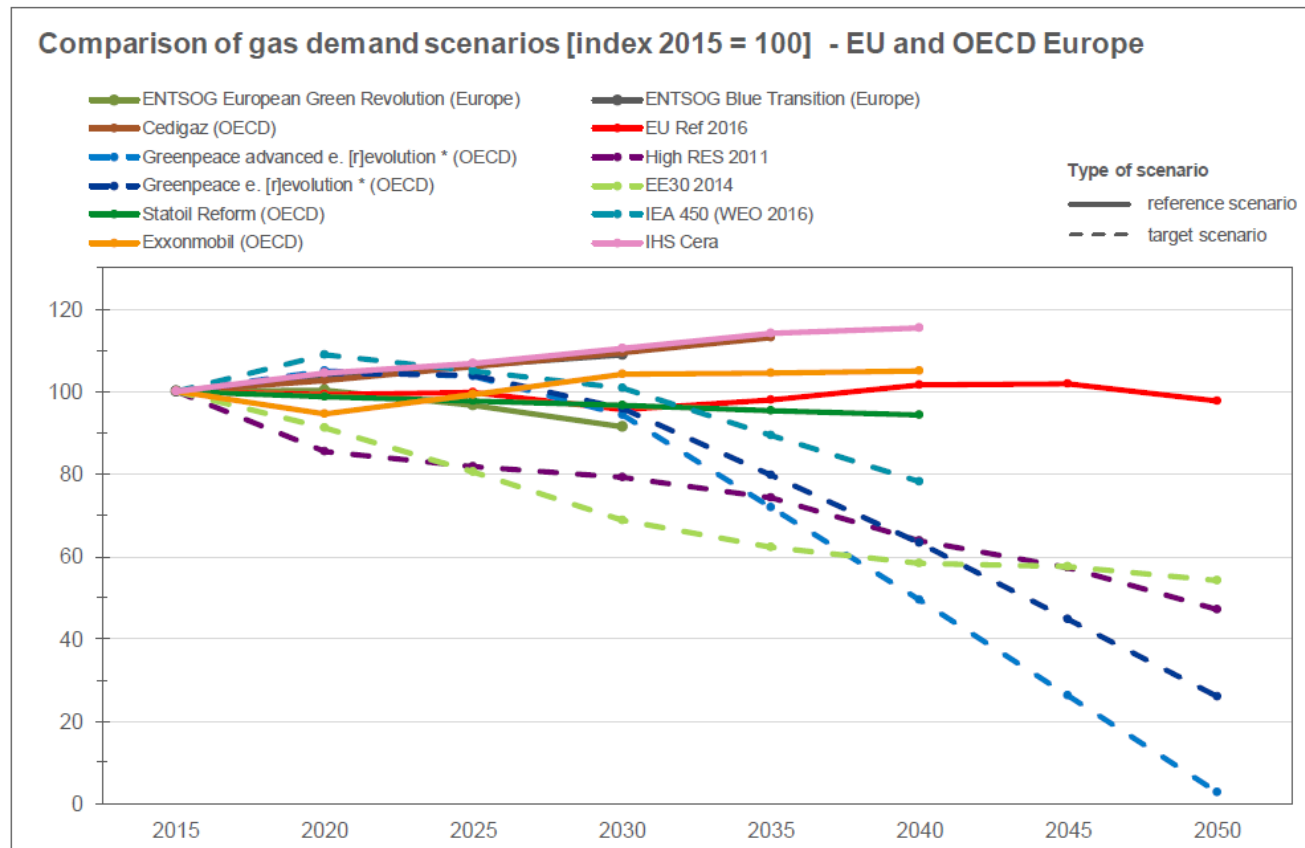
# Climate Policy



# Decarbonization



# De-Carbonization – Risk Exposure



- Prognos 2017 study presents a collection of demand scenarios with an extreme range
- The volume of imports is one question, the use of LTC's is another one

Source: Prognos, Current Status and Perspectives of the European Gas Balance, Jan. 2017, p. 60 based on (Cedigaz 2015), EC, 2016), E3M, 2014), (ENTSOG, 2015), ExxonMobil, 2016), (HIS, 2016)

# De-Carbonization and Import Volumes

- Probability of decarbonization target achievement is questionable
- Individual national decarbonization policies will affect regions differently
- Natural gas may even be pushed by its emission benefits (temporarily)
- Even with decarbonization gas may stay for large installations with CCS
- Pressure for P2G will correlate with further growth of volatile REN (surplus) power generation
- Infrastructure providers required to provide capacities at high level with risk of utilization
- Gas industry faces a volume risk ultimately ending up at producers

# De-Carbonization and Preference for LTC`s

- Current LTC`s for WE mostly end before 2035
- If additional supply needs large investments, LTC`s are still on the agenda
- LTC market may grow in a moderately declining gas market
- New LTC`s may contribute as far and where they can add value by existing and new functions (e.g. dealing with declining market)
- The general perception of gas industry (maturity or decline) will influence the readiness on the part of the banks
- Investors and financiers may limit the project durations, limiting also the potential for LTC`s

Большое спасибо за Ваше внимание!

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