

# Severstal-Resurs & STEAG Saar Energie AG

## Project „VORKUTA“

### Jl aspects of mine gas utilization

## Utilization of coal mine methane

- Significant improvement of miner's safety → changing (political) image of a whole industry
- 1 ton of reduced CH<sub>4</sub> emissions = approx. 18.25 tons of reduced CO<sub>2</sub> emissions (incl. replacement of other fossil fuels)
- Russia: CH<sub>4</sub> emission saving potential from active mines → approx. 720,000 tons CH<sub>4</sub> per year → approx. 1,200 MW installed power output (availab. 75%, efficiency 80%)
- approx. 13.1 mil tons CO<sub>2</sub> reduction per year
- at 5 € / ERU: 65.5 mil € per year

## Project key data

- Project location: Coal mining region of Vorkuta
- Utilization of coal mine gas
  - in gas generator sets of approx. 62 MW<sub>el</sub> at three locations
  - in hot flares of approx. 135 MW<sub>th</sub>
- Emission reductions:  
calcul. 12.2 mil tons CO<sub>2eq</sub> from 1st Jan 2008 to 31st Dec 2012

## Project partners

- Russian partner:
  - Severstal-Resurs      mining holding of the Severstal group
  - Vorkutaugol      coal mining subsidiary of Severstal-Resurs. Located in Vorkuta region  
Coal output: 9-10 mil tons p.a.  
(concentrate basis)
- German partner:
  - STEAG Saar Energie      part of the power cy. STEAG
  - Leader in utilization technology and utilization processes
  - International references in design, erection and operation of extraction and utilization plants

## Project schedule without fast Russian JI implementation

- |                      |                 |
|----------------------|-----------------|
| • Start of operation | Dec 2007        |
| • ERUs 2008          | 1.3 mil         |
| • ERUs 2009 - 2012   | 10.9 mil        |
| • <b>ERUs total</b>  | <b>12.2 mil</b> |

## Project schedule with delayed Russian JI implementation

- |                      |                 |
|----------------------|-----------------|
| • LoA in             | May 2008        |
| • Start of operation | Apr 2009        |
| • ERUs 2008          | 0.0 mil         |
| • ERUs 2009 - 2012   | 10.2 mil        |
| • <b>ERUs total</b>  | <b>10.2 mil</b> |

# Consequences of Russian JI delay I

## For our project

- not realized emission savings: **2.0 mil tons CO<sub>2eq</sub> → 10.0 mil €**
- Delay in miners' safety improvement
- Baseline of projects may change with a growing number of CMM projects in other countries (e.g. Ukraine, China)
  - **giving Russian projects a disadvantage**

## Financing & JI regulation

- Financing model strongly based on forward sale of ERUs / credits with strong security attributes
- no suitable JI legislation → no forward sale → expensive or no financing

## Consequences of Russian JI delay II

- Project selection and emission credit transaction model to be applied in Russia significantly influences
  - Time needed for project qualification, LoA and project planning
  - Financing structure, financing cost
  - Credibility of the project
  - Viability of the project as a whole!

**→ Significant impact on attractiveness of JI projects  
in Russia**

# JI-legislation in Russia - What to do?

- Make it transparent & simple & now
  - Avoid adverse impact on utilization of Russian emission saving potential
  - Avoid adverse impact on miner's safety
  - Avoid adverse impact on project credibility and time schedules
- Ensure
  - Maximum utilization of the emission saving potentials
  - Maximum return for Russian project partners
  - Creation of investment funds in core business (safety, production)
- Enable
  - Cost efficient and transparent financing
  - Utilization of emission savings for financing

## Utilization of JI potential in Russia – What can we do?

- Design, promote and execute approvable projects
- Overcome technological and operational barriers
- Enhance cooperation between project partners and public authorities
- Enhance integration of know-how in Kyoto-based business
- Support the JI-process in Russia by our projects