

## **Outline of a study *analysing the dynamics of coal demand in Tajikistan until 2050 and viability of replacing coal with alternative domestic energy sources.***

Executive Summary (approx. 3 pages)

Introduction (approx. 1 page)

Part one: current situation

1. Brief assessment of the energy mix in Tajikistan (approx. 3 pages)
  - The current energy mix in the country
  - The local energy security concerns and availability of domestic resources
  - The currently forecasted energy demand in the country until 2050
  - The current governmental energy strategy until 2050
2. Brief assessment of the current energy-related global and regional situation (approx. 3 pages)
  - International environmental pressures and commitments undertaken by Tajikistan in that field;
  - The current global and Central Asian coal market;
  - The current geopolitical situation and its impact on coal prices and on security of energy supply from foreign sources.
3. Assessment of the current coal demand in Tajikistan (approx. 6 pages)
  - Coal demand by local industrial and commercial users
  - Coal demand in the local households sector
  - The magnitude and dynamics of the current coal market in the country
  - Sources of coal supply: domestic vs. foreign, and their relative scale
  - Efficiency of the use of coal in the country (patterns of use, regulations, subsidies, strengths and weaknesses of the local coal industry)
  - Local issues related to coal mining (geology, methane, water, regulations, management, etc.)
4. Assessment of coal resources and supply potential (approx. 4 pages)
  - Summary of previous coal resource assessments, mining projects, and plans for exploration
  - Map of coal existing and planned resource development areas
  - Description of organizations that will develop coal resources
  - Description of proposed projects and the projected costs

Part two: looking into the future (to be delivered by the consultant)

5. Assessment of available pathways for the country's energy mix in the future (approx. 6 pages)
  - The expected international environmental framework
  - the impact of increased fossil fuel use on Tajikistan's NDC
  - Potential for construction of new thermal power plants and for application of clean coal technologies (HELE, CCUS) in the country (costs, environmental effect, CO<sub>2</sub> storage potential)
  - Forecast of considered energy production unit costs by fuel type
  - Indirect costs of using coal (including environmental and health costs) as compared to indirect costs of using other fuels
  - Access to funds for coal related projects vs. projects for alternative sources of energy
  - Possible geopolitical scenarios and the energy security factor

6. A forecast of coal demand dynamic in Tajikistan until 2050 taking into account the results of the above-mentioned assessments (approx. 7 pages)
  - Description of likely future domestic market
  - Expected energy demand by local commercial and industrial users, indicating the percentage of it that is to be delivered by coal (expected coal demand)
  - Brief analysis of the possibility of using caking coals, anthracites, and hard coals for technological purposes, as a raw material for the industry
  - Expected energy demand in the local households sector, indicating the percentage of it that is to be delivered by coal (expected coal demand)
  - Overall expected coal demand in the country
  - Potential for export of the Tajik coal to the neighboring countries
7. Viability of replacing coal (fully or partially) with alternative domestic energy sources (approx. 4 pages)
  - Which fuels are the most suitable to replace coal
  - The relative cost of reorienting towards alternative fuels, including the expected dynamic of energy unit price by each of them
  - How much of projected need could be reduced by instituting energy efficiency policies and supports
8. Conclusions and recommendations (approx. 4 pages)
  - Summary of the findings
  - Recommendations
    - Coal as an energy source (coal vs. renewables, domestic vs. imported)
    - Coal for other purposes
    - Energy resources alternative to coal
    - Strategies, regulations, financing, cooperation

References

Annexes (if necessary)