

## Mapping CCS in Bulgaria (Report Summary)



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## Energy production and CO2 emissions from different fossil fuels

	% of power generation	GWh (electricity)	CO2 emissions (million tonnes) from electricity
Coal	43.6%	19 791	28
Natural gas	4%	2 336	1.2
Oil	1%	568	-
Total	48.6%	22 695	29.2

## Scenarios for different greenhouse gas reduction trajectories

Currently, there are no greenhouse gas reduction scenarios in existence beyond 2020 with government commitment.

Title	Name of institution	Year	Description
Draft of the Bulgarian Energy Strategy by 2020	Ministry of Economy and Energy	2008-2020	See the <a href="#">Draft Strategy</a>
“Bulgarian Vision for Sustainable Energy”	INFORSE-Europe and Za Zemiata	2008-2050	Bulgaria can become carbon neutral by 2050, See <a href="#">here</a>

## New Thermal Power Plants

There are 2 projects for the commissioning of new coal-power plants in Bulgaria and a possible construction of 2 new units in the state owned Maritsa East 2. But there is no clear timeline for the projects.

- **Maritsa East 4:** Presently, the government of Bulgaria plans the building of a new lignite capacity “Maritsa East 4” with 600 MW installed capacity. The project reportedly is estimated at €1 billion. The government hasn’t opened a procedure for the construction of the new power plant but interest has been expressed so far by British and US investors. The successful realization of the project depends on the funding options, which is being discussed at European level.
- **Lom Lignite Energy Project:** A demonstration project “Lom Lignite Energy Project”, the investor Enemona, private energy company plans to develop mine together with thermal power plant (installed capacity of 400-600 MW), 14% local lignite resources

with Integrated Gasification Combined Cycle. The project is estimated at €750-850 million.

### State of regulatory process for CCS

The process of transposition of the EU legislative framework into the national law has not started yet. Possibly, the competent ministries will be both the Ministry of Environment and Waters and the Ministry of Economy and Energy.

Name	Position	Contacts
<b>Ministry of Environment and Waters</b>		
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### National CCS supporting programs and plans for full scale CCS

There is no national CCS supporting program at the moment. In the 3d National Action Plan on Climate Change 2009-2012, CCS is expected to have an equal role in Bulgaria for mitigating climate change among with RES and energy efficiency.

- The Ministry of Environment and Waters plans to start by the end of 2009 a large scale research project for identification of geological formations that could be used as CO<sub>2</sub> storage sites.
- The EBRD will assist the Ministry of Economy and Energy to assess the technical and economic feasibility for the transport and storage of CO<sub>2</sub> in Bulgaria by contracting a consultant. The assignment will start in July 2009 with the maximum budget of €500 000.
- First estimation of CO<sub>2</sub> storage capacity was made as part of the CASTOR project (2004-2005) in association with Bulgarian research bodies. Second one is the assessment of EU GeoCapacity project (2006-2008). Scientists groups in cooperation with interested stakeholders have made surveys and special studies on the storage options.

Plans for a full scale CCS project: In the 3d National Action Plan will be clarified if Bulgaria will have a full scale CCS. Proposed projects:

- Maritsa East 4
- Lom Lignite Energy Project

Main blocking factors up to now:

- Lack of a large scale CO2 storage sites research
- Funding issues
- Insufficient CCS communication
- Regulatory uncertainty on CO2 transport and storage