The activities of Westinghouse in Bulgaria
Todor Todorov

In our opinion, the government's decision to build Kozloduy 7-8 with Westinghouse AP1000 reactors is illegal. From the very beginning, the project started with political pressure and hasty decisions by the parliament and politicians. Instead of public discussion, economic analysis, does Bulgaria need a new nuclear power plant, instead of announcing a tender for a builder and type of reactor, political solutions are offered with a demonstration of negotiations with the American government.

# **Decision of the Parliament of 12.01.2023**

Without discussion, the parliament seizes the powers of the government and decides without a tender for unit 7 of the Kozloduy NPP be with Westinghouse's AP 1000.

The government to hold negotiations with the US on agreement for the construction of the 7th block.

Obliges the government through the Minister of Energy in

deadline of March 1, 2023 to undertake all necessary actions for making a decision under Art.

45 of the Law on the safe use of nuclear energy for the construction of an energy facility - NPP approved by the Nuclear Regulatory Agency Site No. 2 - Block 7 of the Kozloduy NPP.

Government to take all necessary action for starting the licensing procedure according to

The Law on the Safe Use of Nuclear Energy and the EIA procedure for the construction of second identical block of the approved by

The Nuclear Regulatory Agency site (block 8) of NPP "Kozloduy").

**Government decision to build 7-8 block** 

October 25, 2023, Government meeting:

Report approving the report of the Minister of energy to take action on construction of units 7 and 8 of Kozloduy NPP EAD with AR 1000 technology

(https://pris.government.bg/document/d93058dfeb577a9e1864ac7cb93ba179)

The Minister of Energy does not present
the required analyzes and assessments, as it is not
developed, has not made them publicly available and

did not organize their public discussion.

**Gross violation of the requirements of Article 45** 

of the Safe Use of Nuclear Energy Act, as well as the priority requirement of safety, formulated in Article 3 of the Law on Safe Use of Nuclear Energy.

Violation of the Convention on the Right to information and public participation in the decision-making process on matters of the environment /Aarhus/, as well as Art. 8 of European Convention on Human Rights.

An appeal was filed in the High Administrative Court for the annulment of the Government's Decision on the construction of block 7 and 8 of Kozloduy NPP as illegal (case 63/03.01.2024)

## Government lies

Decisions of the parliament and the government to spend tens of billions without arguments.

The Prime Minister: "They will replace units 1-4" and "AP1000 can quickly change its power!"

This is a lie, units 1-4 of the Kozloduy NPP were closed 20 years ago and there is no problem with the energy balance during this period.

AP 1000 can to change its power but this has negative economic consequences, the price of the produced energy will rise and become unsellable.

Bulgarian MEP: "In the current geopolitical conditions, the security of energy supplies is most important, albeit at the cost of more expensive electricity.

The security!?! Some lessons from the war in Ukraine, where the Zaporozhye NPP, the largest NPP in Europe, occupied by the Russian army disappeared as an energy site without being destroyed.

Bulgarian MPs: It is important to be the first in Europe to build AP1000 - the Bulgarian industry will produce equipment.

It is not clear what the Bulgarian industry will produce and how - turbines, generators

**AP 1000** 

Thermal power 3400 MW, electric power 2500 MW (gross), net 1117 - 1150 MW, post-accident cooling with passive systems

#### China:

4 blocks built, 2009-2018.

Average construction time – 9 years;

#### **USA:**

- 2013, two units were started at the NPP

Summer; 2017 abandoned after invested

over 9 billion USD:

- 2013, two units were started at the NPP

**Vogtle networked March 2023/2024.** 

Average build time: 10+

years instead of the promised under 5 years;

Start-up costs: about 35 billion USD

instead of the promised 14 billion USD. The most expensive reactors in

nuclear history

Energy – 14,000 USD/kW of electricity installed.

**Electricity price: 170-180 USD/MWh** 

After the crash with Vogtle 3-4 nobody in

North America doesn't want to build the AR 1000,

as well as in England, Turkey and the Czech Republic.

## **INITIAL COSTS 7-8 block:**

Repetition of lies about Belene NPP:

Deputy Minister Nikolov: for two AR 1000 reactors, max. 12 billion Euros?!?

Minister Radev: red line for two AR 1000 reactors, 14 billion USD?!?

(5600 USD/inst. kW el.)

## **FORECASTS:**

Lazard, for one AR1000 reactor: 10.5 – 17.5 billion USD

FACTS: VOGTLE 3-4 NPP: USD 35 billion (USD 14,000/inst. kW el.) French Court of Accounts 2020 estimate for 1,650 MW Flamanville

EPR: USD 21 billion2015 (12.700 USD/inst. kW el.)

## **FINANCING:**

No strategic/foreign investors, 100% state participation?!?

25-30% of the state budget

70-75% of initial costs through debt financing, with government guarantees

The EIB and EBRD do not plan to finance the construction of new reactors due to the high risk of delays and cost overruns. (last nuclear conference in Brussels)

<u>Cost of electricity from unit 7-8 at Kozloduy NPP - statements and facts</u>

Minister of Energy, Radev: max. BGN 127/MWh?!? = 70 USD/MWh

FACTS: VOGTLE 3-4 NPP: 170-180 USD/MWh

2020 French Court of Accounts estimate for 1,650 MW Flamanville EPR 122–133 USD2015/MWh

FORECASTS Lazard 2023 LCOE:141 – 221 USD/MWh

FORECASTS Wood Mackenzie 2023 LCOE EUROPE: by 2040 USD 130 – 140/MWh

IEA 2022 and 2023 World Energy Outlooks, EUROPE 128-132 USD/MWh

<u>US-Bulgaria intergovernmental agreement on nuclear energy cooperation - excerpts.</u>

## **Article 7. PUBLIC PROCUREMENTS**

The parties note that US expertise will be most effective if the technology provider and the project's EPC (Engineering + Proqurement + Construction) are US entities.

In this regard, if necessary and appropriate, Bulgaria should seek to obtain an exception or permission from the EC and/or other competent authorities that the financing of the Project and the selection of a technology supplier need not be subject to an open market procedure.

Bulgaria will also consider using a US entity as the EPC contractor for the project and obtaining an exemption or authorization from those authorities that the selection of such EPC contractor should not be subject to an open market procedure