

Development Forum

TES 6: Slovenian Future?

New development vision of Slovenia, EU climate policy and the project of Unit 6 of Sostanj Thermal Power Plant

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City Hotel, Dalmatinova 15, Ljubljana, Slovenia

Summary Report

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Background and Purpose

The planned upgrading of the Sostanj Thermal Power Plant with the construction of Unit 6 (TPPS6) would have a significant impact on the future of Slovenia. The significance of the investment goes beyond its financial value of 1,2 billion EUR, as its expected development, energy, financial and environmental impacts will last beyond 2050. Despite its importance and the long-term impact of the project a comprehensive consultation was never organised at the national level. The current procedures are based on documents from years ago, and the decisions in recent months have been restricted to narrow circles of the investor, owner, ministries and banks. The public beyond these narrow circles have been left with random articles in the media and statements by politicians. Most of the citizens in Slovenia do not understand what the project is about, how the procedures are taking place, who will pay the bill for the investment, whether final decisions have been taken yet, who are the competent decision-makers and where in the process (if at all) are the points of entry to influence the final decision.

In the project the highest standards of process transparency so far were set by the European Bank for Reconstruction and Development (EBRD), where the Sostanj Thermal Power Plant asked for a loan in the amount of 350M EUR in 2009. In November 2009 EBRD opened a consultation with stakeholders about the Environmental Impact Report, during the period until 15 February 2010.

Umanotera used the EBRD initiative to introduce public discussion including a development forum about the TPPS6, in the context of the preparation of strategic documents that are currently being prepared in Slovenia: the new National Energy Programme, the climate law and strategy and the updated Development Strategy of Slovenia.

The purpose of the development forum was primarily to open the communication space for the presentation of important facts about TPPS6, for exchange of different opinions and a discussion of possible alternatives. The purpose was not, however, to search for common viewpoints. Such a task would require much more time and further opportunities for exchange of opinions and comparison of alternatives.

Event Structure

The discussion at the event was focused on three clusters of topics:

1. Presentation of the project; technology, financing, environmental impacts, decision-making procedures and public participation
2. The TPPS6 project in relation to the new development vision of Slovenia, the emerging National Energy Programme and Climate Strategy and the EU climate policy
3. Alternative scenarios of the power system in Slovenia.

There were 13 invited speakers present at the event (their presentations are posted on the web <http://www.umanotera.org/index.php?node=12&id=12178>). There were 133 registered participants and they were also invited to present their comments. There were 11 such contributions. A video record of the event is posted on the web: <http://www.s12.si/ekologija/razno-ostali-prispevki/883-tes-6-video-prispevki>. Before and after the forum an internet consultation was opened at <http://www.evropske-volitve.si/tes6>.

Summary of Presentations

Part 1: Project Presentation

Uroš Rotnik, Managing Director of Sostanj Thermal Power Plant

The purpose of the construction of Unit 6 is to provide reliable supply of electricity, reduction of own price, reduction of environmental impact, preservation of site dedicated to power production and preservation of jobs.

The planned programme is to close down Units 1 through 4 in 2015 and Unit 5 to serve as cold reserve to operate in case of fault and potential higher demand for electricity in Slovenia. The production capacity would be replaced by Unit 6, with the annual production 3.500GWh. The CO₂ emissions would be reduced by 1,4 million tons.

Financing: the estimated investment value of the project is 1,1 billion EUR, possible sources of funding include about 440 million by investor and owner, expected loans from EIB and EBRD are up to 700 million, a consortium of investors about 200 million.

Borut Meh, General Manager Holdinga slovenskih elektrarn (HSE)

As owner of Sostanj Thermal Power Plant and investor emphasised:

- Unit 6 is a replacement plant for the existing thermal power plant units and does not mean a significant increase of capacity,
- There is no opportunity for renewable energy sources without TPPS6, which ensures stability of the system. TPPS6 is not an alternative to the second unit of Nuclear Power Plant at Krsko
- TPPS6 is the most appropriate way of phasing out the lignite mine of Velenje.

Darko Menih, Mayor of Sostanj Municipality and Member of Parliament

Following the initial lack of trust by the local population, now there is high degree of support for the project, especially as it will bring a reduction of the local environmental pollution. The project will bring new jobs and cleaner environment.

Rudi Voncina, responsible person for EIA report, Elektroinštitut Milan Vidmar

Presentation of data from the report that was the basis of the environmental consent issued by the Environment Agency: with the construction of TPPS6 emissions of SO₂ and NO_x will be reduced by nearly a half, dust emissions will be reduced, while CO₂ emissions will stay at about the same level until 2020 (approx. 4,5 million tons/year) and start declining thereafter.

Part 2: Strategic Energy-Climate Context

Janez Kopač, Director of Directorate of Energy at the Ministry of Economy

Presented legal and strategic framework for the new national energy programme. The four strategic objectives of the programme are: reliable supply, competitiveness, environment and social cohesion.

The key challenges of the Slovenian energy sector are: implementation gap of plans and programmes, poor efficiency, outdated power production units and high energy intensity (high above EU average) due to large industrial installations.

Projected use of energy will reach 2008 levels in the year 2016, following the drop due to the recession in 2009.

There are a number of outdated thermal power units that will have to be closed for failing to meet environmental standards, so without any new installations production capacity in Slovenia will be threatened in 2016.

There are three mid-term options for power supply in Slovenia: import, gas thermal and coal. Pricewise coal is the best choice in the mid-term period. Efficient use of energy and renewable will only be able to compensate for the growth in demand, and will not be able to replace the old outdated units that are closing.

Jernej Stritih, Director of Government Office for Climate Change

Government Office for Climate Change is preparing a Climate Law and Climate Strategy. It is expected that they will set GHG reduction targets in line with scientific recommendations to stabilise warming at 2 degrees. For developed industrial countries including Slovenia this means a reduction of 80% by 2050.

Last year's COP conference in Copenhagen showed, despite the disappointments, that energy and climate have become a subject of geopolitical influence and competition, which is also expressed in considerable investments into green technologies in China, South Korea and the USA.

The projected emissions of CO₂ emissions from TPPS show, that according to a hypothetical scenario of 80% reduction, the entire eligible emission quota for Slovenia would be used by Sostanj.

The open questions for Slovenia in transition to a low-carbon economy are: how fast is the transition going to happen, what fossil fuels will have the advantage in the transition period, technology and price of CCS, and the uncertainty regarding energy prices (production, market and carbon).

Stane Merše, Head of Center for Energy Efficiency, Jozef Stefan Institute

Jozef Stefan Institute is preparing expert background papers for the emerging energy and climate policies. All scenarios that have been prepared show a growth of electricity use. The speed of growth will depend on the degree of transition to electric cars in transport and on the use of heat pumps.

Growth is expected in households, transport and other use, while it is expected to stabilise relative to 2008 in industry and construction.

40% of Slovenian power production capacity is actually outdated and will no longer meet environmental standards from 2016 on, so they will have to be replaced.

Options available include: priority emphasis on energy efficiency, decentralised production (renewable and co-generation), preserved diversity of production sources (nuclear, natural gas, import and TPPS).

The TPPS project is rated very good in respect to supply reliability, preservation of domestic fossil source, good with respect to quality of supply and robustness to price pressure, neutral regarding acceptability of price and negative in terms of environmental impacts.

Any deviation from the planned price framework would result in risk to economic viability, so a successful implementation of the project is a great responsibility of the TPPS and HSE managements.

Slovenia needs a good project for TPPS.

Part 3: Alternative Scenarios for the Energy Sector in Slovenia

Mihael Tomšič, Honorary President, Slovenian E-Forum

Alternative scenarios are a prerequisite for quality decision-making. The question is whether alternative solutions are prepared on time for the basis for decisions, or are they prepared merely to justify a decision already taken.

There is a legal requirement in the Energy Law to prepare multiple long-term energy scenarios.

TPPS6 was not included in the National Energy Programme from 2004, there was a decrease of production from Sostanj planned, compensated for by smaller gas units and renewables.

In the long-term scenarios from 2007 TPPS6 is included in all options, however we need additional two scenarios: one with a smaller unit at TPPS (300-400 MW), and one without TPPS6, both without a new nuclear reactor.

Another option should be considered: the use of energy intensive industry should be treated outside national scenarios.

Nina Štros, Greenpeace

The Energy (R)evolution independent study was prepared by Greenpeace and the European Renewable Energy Council (EREC) and focused on reaching climate targets for 2050 that science recommends. It is based on gradual phase-out of fossil fuels, use of tested sustainable technologies (renewable and decentralised co-generation), without nuclear energy and CCS.

In EU-27 the scenario is forecasting a 56% reduction in end use of energy by 2050 due to increased energy efficiency, 75% reduction of CO₂ and an 88% share of renewable sources for electricity production. There is an interesting positive effect on job creation in the energy production sector: compared with the reference scenario by EIA, Energy (R)evolution would create almost 400.000 additional jobs in the EU.

Andrej Mohar, Dark Sky Society

Potential of energy efficiency in the field of exterior lighting was presented. A comparison of energy use for city lighting in cities of Maribor, Vienna and Brussels shows a high degree of wastefulness in Slovenian cities, even in the rate of 1:3 and 1:4.

Considerable energy savings are possible in the field of lighting; up to 45% in households, 60% in business and private sectors, and 80% in advertising. Total savings would amount to 46 MW and 23 million EUR.

Boris Sucic, Center for Energy Efficiency, Jozef Stefan Institute

Potential of decentralised natural gas co-generation units was presented. Co-generation has a long tradition in Slovenia (TE-TOL in Ljubljana, TPPS as well as in industry and tourism), however many more opportunities exist. According to the intensive scenario these units would have the power of 406 MW and would generate up to 2287 GWh by 2030. Technically even higher production is possible. Such a production of power reduces costs and emissions of GHG and increases competitiveness and supply reliability. This is in line with the EU energy policy. New technologies even enable co-generation in individual households.

Dag Kralj, Board Member, Bisol d.o.o.

Solar power generation has multiple benefits; it is a renewable resource, has an enormous potential that exceeds the demand for end use by a factor of 8000, it is environmentally acceptable, offers modular use and requires relatively simple maintenance.

With the growth of production the costs are falling very quickly, so the EU estimates that by 2020 80% of the markets in Europe will reach a competitiveness tipping point for solar energy. While Europe is taking a leading place in the world, Slovenia lags far behind in installed solar power capacity.

Božo Dukić, Managing Director Geosonda d.o.o.

Slovenia has a considerable potential of geothermal energy, highest in the Prekmurje region, where it is estimated that a total of 600MW of power generation is possible. So far only small scale initiatives with private funding exist, without any support from the state, and facing considerable red tape obstacles.

An additional potential for the use of geothermal energy is offered by heat pumps for heating and cooling. To reach the EU 20-20-20 targets 90.000 heating units currently burning oil or gas could be converted to heat pumps, creating 1000 new jobs.

Summary fo Discussion

1. Comments regarding the openness and transparency of the process

- Construction of Unit 6 of the Sostanj Thermal Power Plant is a project of great national significance from the energy, environmental and financial point of view. Because of its wider importance, it would require a wide public consultation and a degree of national consensus regarding the decision, not just in the local environment.
- The present discussion is taking place 5 years too late.
- At the forum the Managing Director of STPP presented a new scenario that is fundamentally different from the one presented in the official documentation on the internet. Such changing of information resulted in unacceptable disorientation for stakeholders who don't know what the subject of consultation is, and what the relevant source of information is.
- Have the Slovenian politicians learned anything from the Sostanj case? Especially about the importance of scenarios in decision-making.

2. Comments regarding the content

Support:

- In the Slovenian public a narrow view has emerged that the decision needs to be made between two options; the new unit of Sostanj Thermal Power Plant and the new reactor of the Krsko Nuclear Power Plant. Faced with this choice two environmentalists give their support to the Sostanj plant out of resistance against nuclear power. One of the participants did consider nuclear energy to be the only viable alternative.
- The STPP project is expected to bring benefits for the local population through reductions of SO₂, NO_x, noise and CO emissions, as well as reduction of CO₂,
- STPP is an opportunity for new jobs; renewables are the final solution, however at the moment still too expensive.

Alternatives and concerns:

- Alternatives are first necessary at the level of scenarios, and only then at the level of projects.
- The issue of accountability for decisions and taking responsibility for risks involved with this project was raised and how this will be ensured.
- Questions of financial viability of the project were raised – resulting from the high investment costs of building, but also because of uncertainty about the price of carbon in the future.
- There is the issue of compatibility of the project with the transition to a low-carbon economy and to decentralised, smart grids that will support fully renewable power production in the future.
- Energy policy needs to respect the limits of environmental space and the use of energy in Slovenia needs to be drastically reduced by 2050.
- Health aspects of the project on the population of Sostanj and wider surroundings have not been adequately explored and addressed.
- A more comprehensive view of energy efficiency should include the efficiency of materials. In this respect wood is the material of choice and a great development opportunity in Slovenia.