
Energy sources in Albania and the nuclear option

Seoul. 27 – 31 August 2012
Albania is located in the Western part of the Balkan Peninsula, at the Eastern coasts of Adriatic and Ionian seas.

Albania has common national borders with Montenegro (north, north west), Kossovo (north east), Macedonia (east), Greece (south, south east).

Albania is characterized by a Mediterranean climate, consisting of hot and dry summer, with long days of sunshine, mild and wet winter.
Energy demand in Albania

The increasing demand on electricity is a long-term and worldwide issue, as well as a challenge to be successfully faced.

Based on the National Strategy on Energy, needs in Albania for energy are continuously growing. Over the last 10 years, there has been a 70% increase in demand for energy.

Electricity demand and supply in Albania:

<table>
<thead>
<tr>
<th>Year</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production (GWh)</td>
<td>3204</td>
<td>4974</td>
<td>5467</td>
<td>5409</td>
<td>5516</td>
<td>2933</td>
<td>3770</td>
<td>5221</td>
<td>7743</td>
</tr>
<tr>
<td>Import (GWh)</td>
<td>2072</td>
<td>937</td>
<td>567</td>
<td>365</td>
<td>633</td>
<td>2828</td>
<td>2417</td>
<td>1425</td>
<td></td>
</tr>
<tr>
<td>Consumption (GWh)</td>
<td>5276</td>
<td>5911</td>
<td>6034</td>
<td>5774</td>
<td>6149</td>
<td>5761</td>
<td>6187</td>
<td>6646</td>
<td>6773</td>
</tr>
</tbody>
</table>
The generating sources of electricity in Albania

Albania is a Mediterranean country, with important natural resources and a climate, consisting in hot and dry summers, with mild and wet winters. Albania has different natural sources of electricity generation like:

- Water,
- Fossils (coal, hydrocarbons),
- Renewable (wind, sun, biomass etc.)

Albania is, for the moment, benefiting only from its hydropower plants to get electricity.
Water

Albania is a country with a good potential in water. Almost all the local electricity production is based on hydropower plants (more than 98%). The actual installed capacity is around 1500 MW (mostly in the north).
Up to now only about 35% of the water potential is used to produce electricity.
Albania, depending on the yearly weather situation, in order to meet the demand, is obliged to buy electricity form the regional market.

Small hydro power plants

Number of licenses approved by the government: ~ 110
Evaluated potential on new installed capacities: ~ 1000 MW
Timetable: In the coming years
Water

The generation sites are almost all, at present, located in the north, on the same river (the sources are in neighboring countries).

Due to the location, losses during the transmission become inevitable and are evaluated to be at about 33-38%!

The dry season of the last year in Albania and in the Balkan region, created serious problems with the electricity supply. Being regional the problem, it immediately impacts the prices in the regional market of the electricity.

The diversification of electricity sources is essential.
Transmission capacities

In operation:
• Interconnection 400kV grid with Greece;
• Interconnection 400 kV grid with Montenegro.

Under construction:
• The ring in the southern part of Albania;
• Local transmission lines (220 kV/110kV) in the central, north-western and north-eastern part of the country.

Under tender procedures:
Interconnection 400 kV grid with Kosovo

Under consideration:
• Interconnection 400 kV grid with Macedonia;
• Interconnection 400 kV grid with Italy
Electricity in Albania

The electricity supply is a very important security, economic, social, environmental and political issue;

The questions related to the growing demand for electricity, have to be considered, both, in a national and international scale;

The electricity supply in Albania, in the coming years, will be programmed and guaranteed, considering issues and concerns, in both national and international scale.

Albania aims to:

• Increase the supply security;
• Diversify the electricity generating sources;
• Define real electricity prices;
• Operate into the regional electricity market;
• Connect the country to the regional networks;
• Become an environmentally friendly country.
If feasible, why the nuclear option in Albania?

The sustainability in electricity supply is an important target derived from the Strategy of National Security.

Based on the National Strategy on Energy, the demand on electricity is continuously growing.

The Albanian government aims to become an exporter country on electricity, being strongly convinced on the strategic importance of the diversification of electricity sources of generation.

The water can not be the only source of a sustainable electricity generation, due to the weather and climate adversities.

The fossil sources of electricity (coal, hydrocarbons) inevitably will generate greenhouse gases and release them into atmosphere.

The strategic and long term target, to become Albania an environmentally friendly country, obligatorily includes choices on environmentally friendly sources of the electricity generation.
Legislative and government acts

January 20, 2010: Decision Nr. 23 of the Council of Ministers “On the establishment of the National Nuclear Agency”.

The mission of the National Nuclear Agency is to prepare, to take care and to follow up the development of the National Nuclear Program, which will be approved by the Council of Ministers.
The National Nuclear Agency

The National Nuclear Agency is the counterpart institution in Albania for the ongoing National Project ALB 2014 (2012-2013) under the IAEA (TCEU) Programs: “Supporting a Safe and Sustainable Electricity Supply”.

It is an important opportunity for the country to get benefit from the technical support and the experience of the representatives of IAEA, in the framework of this National Project.

At the end of these planned pre-feasibility and feasibility studies related to the present and potential sources of electricity generation, the National Nuclear Agency will be able to suggest to the Albanian Government the options, in order to make a knowledgeable decision referring to the generating sources of electricity.
Considerations

Albania has adopted the declaration of the IAEA Ministerial Conference (Vienna, June 20-24, 2011), as an important document to be taken into account by all member states.

Albanian will pay a particular attention to all five concrete proposals of the Director General of IAEA, on the opening plenary section of the same Conference:

1. **Strengthen IAEA Safety Standards and ensure that they are universally applied**;
2. **Systematically and regularly review the safety of all nuclear power plants**;
3. **Concerns national regulatory bodies, which pay a crucial role in ensuring nuclear safety**;
4. **Strengthen the global emergency preparedness and response system**;
5. **IAEA’s role in receiving and disseminating information**.
Considerations

The energy issues, both in local and global scale, must be managed with:

• high responsibility,
• wisdom,
• long-term perspective,
• less emotional and short running influences,
• less possibility to be influenced by the “competitiveness”,
• more reliable and transparent data and information.
Considerations

The nuclear option must be treated with the needed transparency positives and negatives aspects of all kind of electricity generation sources and make them know to the stakeholders and public.

This is not always the case for the renewable sources!!!

……..The sun is not there and the wind misses when you need for them to generate electricity…..
Conclusions

It is not wise at all to exclude opportunities, especially if they concern long-term, crucial energy and electricity generation issues.

It is of great importance how to coordinate and fit different sources of energy in a long-term national energy program (taking into account regional and larger scale energy realities).
Thank you for your gentle patience!