AKBN

AGJENCIA KOMBETARE E BURIMEVE NATYRORE

NATIONAL AGENCY OF NATURAL RESOURCES

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GREEK – ALBANIAN COOPERATION IN THE ENERGY SECTOR

Tirana, January 15, 2009

ALBANIA

Albania is located in the Western part of the Balkan Peninsula, at the Eastern coasts of Adriatic and Ionian seas.

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

Albania is distinguished for its natural resources. A lot of them have been known and exploited since the ancient times till now days. Other resources are waiting for further research and studies.

INFORMATIVE DATA

Population:	**3.162 million***
Area:	**28 000 km²**
Capital:	**Tirana**
Real GDP growth:	**6,9%**
Inflation rate:	**2.2%**
Unemployment rate:	**13.5%**

***Source: INSTAT**

Total Primary Energy Supply: 2130 Ktoe

Total Final Energy Consumption: 1711 Ktoe

Energy Consumption/1000 inhabitants: 0.54 Ktoe

Electricity Consumption/1000 inhabitants: 93.2 Toe

NATIONAL AGENCY OF NATURAL RESOURCES

The National Agency of Natural Resources has been constituted on August 9, 2006.

One of the main targets of the Agency's activity is to take care over all natural resources, like:

- Minerals
- Hydrocarbons
- Renewable Sources of Energy (water, wind, sun, biomass, etc.)

NATIONAL AGENCY OF NATURAL RESOURCES

- The Agency relates directly to the Minister of Economy, Trade and Energy.
- The Agency acts as advisor to the Minister and the Albanian Government, in what concerns natural resources.
- The Agency performs all needed monitoring and supervising activities, related to the good exploration/exploitation of natural resources.
- The Agency represents the interests of the Albanian Government toward thirds, in what concerns natural resources.

NATIONAL AGENCY OF NATURAL RESOURCES

- The Agency is concerned to inform, promote and attract the interest of serious local and foreign investors, on the Albanian natural resources.
- The Agency is involved in all procedures predicted by the Albanian legislation, aiming the final agreements related to exploration and/or exploitation of natural resources, between the Albanian Government and local or foreign investors.

NATIONAL AGENCY OF NATURAL RESOURCES

- The National Agency of Natural Resources collaborates with local and/or foreign institutions and investors, based on and respecting clear and simple procedures.
- The operation of the Agency guarantees high professional and credential levels.
- The activity of the Agency is based on a legal and regulatory framework, which expresses the Albanian experiences, as well as the most advanced international ones.

STATUS OF THE NATIONAL ENERGY POLICY

Albania is looking at its long-term energy needs, making key decisions related to the coming years.

The main target of the Albanian Energy Policy is to increase the security of supply for a sustainable economic and social development.

The National Agency of Natural Resources is one of the main institutions in Albania dealing with the National Strategy of Energy.

The Agency has the institutional obligation to monitor and update the National Strategy of Energy.

STATUS OF THE NATIONAL ENERGY POLICY

The National Strategy of Energy aims to:

- **The increase of the supply security;**
- **The increase of the energy efficiency in both, supply and demand;**
- **The diversification of the energy sources;**
- **The utilization of renewable energy sources;**
- **The definition of real electricity prices;**
- **The operation into the regional electricity market;**
- **The respect of the environment.**

STATUS OF THE NATIONAL ENERGY POLICY

Albania takes into consideration that:

- **The energy is a very important social, economic, environmental and political issue, both nationally and internationally.**
- **The questions related to the growing demand for energy can be met, both in national and international scale.**
- **The questions related to the programming and guaranteeing the energy supply in the coming years will be considered in both national and international scale.**

STATUS OF THE NATIONAL ENERGY POLICY

Albania, based on the geographic position, on the territory morphology and on its own natural resources, has favorable conditions for energy production, based on sources like:

- Water
- Sun
- Wind
- Biomasses etc.

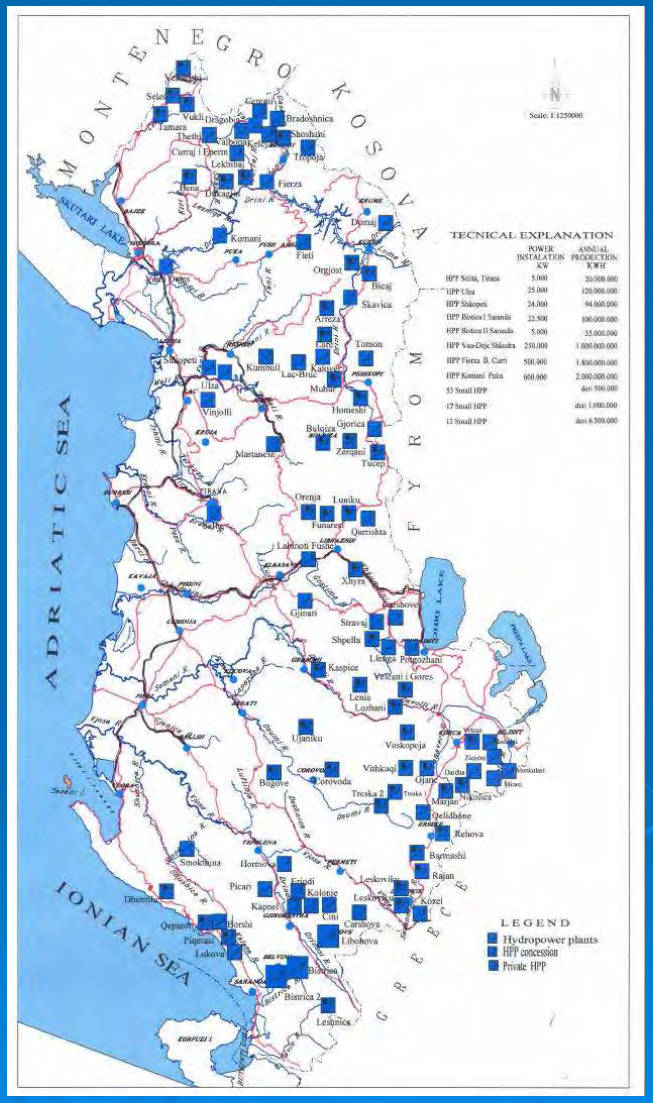
HYDROGRAPHIC DATA

The Albanian hydrographic territory has a surface of about 44,000 km², that is about 57% more than the surface of the country.

The average height of the Albanian hydrographic territory is about 700 m above the sea level.

The average perennial total inflow of all the Albanian rivers is about 1245 m³/s.

All Albanian rivers convey to the sea about 40 billion m³/ year of water.



Distribution of existing HPP

ELECTRICITY PRODUCTION

In the time period from 1945 until 1951, it was produced, in average, 10KWh per resident.

In 1952, entered in operation the hydropower plant Selita (5 MW installed capacity).

In January 1958, entered in operation the hydropower Ulza, (25 MW installed capacity).

In 1970, entered in operation the hydropower plant Shkopeti, the hydropower plant Bistrica I the hydropower plant Bistrica II (51,5 MW installed capacity).

In the time period from 1971 until 1978, entered in operation the hydropower plants Vau Dejës and Fierza (750 MW installed capacity).

In 1985, entered in operation the hydropower plant Koman (600MW installed capacity).

INVESTMENT STATUS

No significant investment, related to hydropower plants construction and energy supply, has been done in Albania, from 1985 on.

In 2006 a new governmental policy on hydropower plants construction and energy supply has been settled down.

A new legal framework has been already approved and entered in force, dealing with the hydropower plants and the hydropower supply.

ACTUAL CAPACITIES AND POTENTIALS

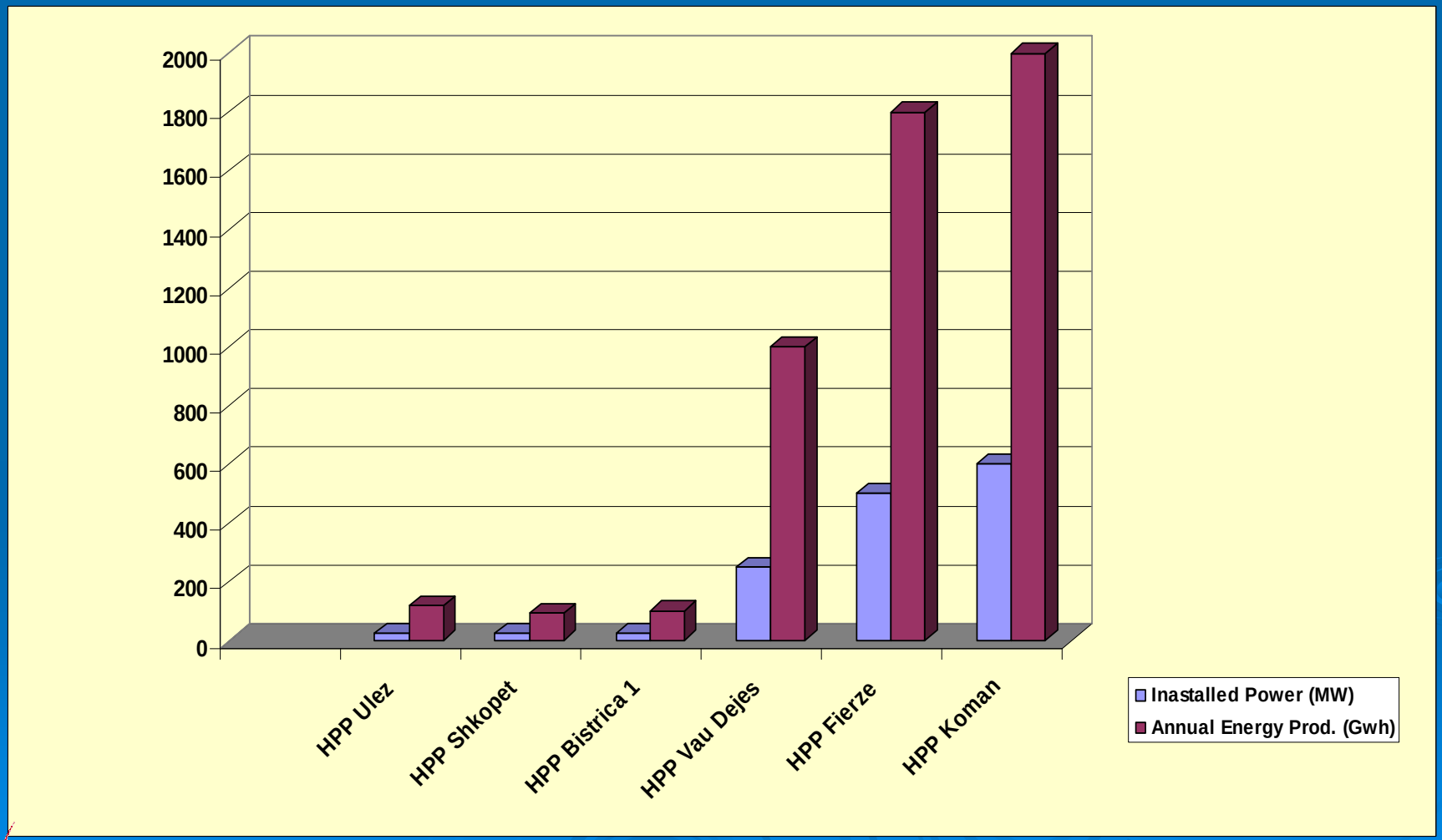
Only 33% of the Albanian hydropower potential has been so far exploited for energy purposes.

- **The already installed capacity is about 1460 MW**
- **The total potential to be installed is about 4.500 MW**
- **The already average generation is about 5270 GWh**
- **The annual generation potential is about 18 TWh**

MAIN HYDRO POWER PLANTS IN ALBANIA

No.	Hydropawer plant	Installed capacity (KW)	Annual generation (KWh)
1.	Ulza (Mati River)	25 000	120 000 000
2.	Shkopeti (Mati River)	24 000	94 000 000
3.	Bistrica I (Bistrica River)	22 500	100 000 000
4.	Vau Dejes (Drini River)	250 000	1 000 000 000
5.	Fierza (Drini River)	500 000	1 800 000 000
6.	Komani (Drini River)	600 000	2 000 000 000
	Total (Capacity, Generation)	1 421 500	5 114 000 000

POWER GENERATION AND INSTALLED CAPACITIES CHART OF BIG SCALE HYDROPOWER PLANTS



POWER POTENTIAL RELATED TO DIFFERENT RIVERS

River	Total capability (MW)	Power potential (10^6) KWh	Installed capacity (MW)	Power generation (10^6) KWh	Potential for utilization (MW)	Generation potential (10^6) KWh
Drini	1,780	6,750	1,350	4,900	430	1,850
Vjosa	387	1,949	0	0	387	1,949
Devoll	246	1,301	0	0	246	1,301
Osum	124	613	0	0	124	613
Mati	112	596	49	214	63,4	382

BIG SCALE HYDRO POWER PLANTS

Hydropower Plant in Ulza

Hydropower Plant in Shkopeti

Hydropower Plant in Bistrica I

Hydropower Plant in Bistrica II

Hydropower Plant in Vau Dejës

Hydropower Plant in Fierza

Hydropower Plant in Koman

Hydropower Plant in Fierza

SMALL HYDRO POWER PLANTS (up to 15MW)

In Albania there are 90 small hydro power plants:

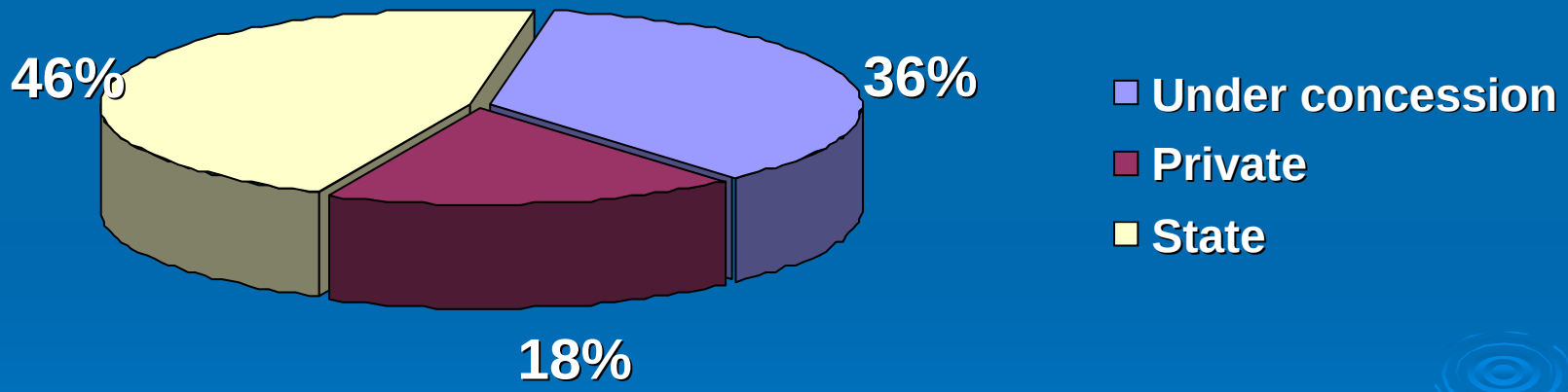
- **83 of them have an installed capacity from 10 KW up to 1 MW.**
- **7 others have an installed capacity from 1 MW up to 5 MW.**

From all small hydropower plants:

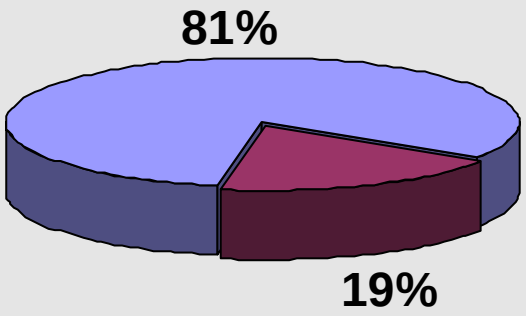
- ⇨ **32 of them are under concession licenses (24,4 MW installed capacity);**
- ⇨ **16 are privatized (2.047 MW installed capacity);**
- ⇨ **42 are still state's property (12.5 MW installed capacity).**

From all 90 small power plants, only 37 are in operation.

ACTUALLY ADMINISTRATIVE STATUS OF HYDROPOWER PLANTS

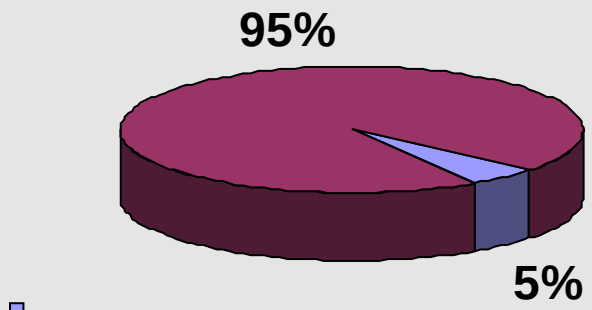


Under Concession

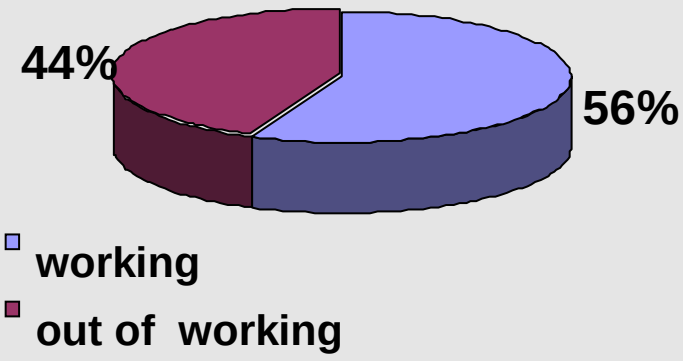


Actually Status of Hydropower Plants (concession, private and state)

State property



Private property



IMPLEMENTATION OF THE LAW "ON CONCESSIONS" IN THE HYDROPOWER SECTOR

- Till now about 160 unsolicited project-proposals on small hydropower plants are already treated. Some of those are in cascades.
- Till now 30 concessionary contracts (total installed capacity of 550 MW) have been approved by the Council of Ministers.
- Till now 8 investment projects are under the negotiation procedure on Shkumbini and Valbona rivers, as well as some on some flows.
- Till now 20 investment projects are under the evaluation procedure by the Bids Evaluation Commission.
- Till now 26 investment projects are under the tender procedure.

THE HYDROGRAPHIC NETWORK IN ALBANIA

River	Length km	Catchment area km^2	Average flow. m^3/s
Buna	41	5.187	320
Drini	285	14.173	352
Mati	115	2.441	103
Ishmi	74	673	20,9
Erzeni	109	760	18,1
Shkumbini	181	2.441	61,5
Semani	281	5.649	95,7
Vjosa	272	6.706	195

MAIN RIVERS AND THEIR HYDROPOWER POTENTIAL

DRINI RIVER

Drini river has two branches: the first one derives from Macedonia (Ohrid Lake), the other from Kossovo. After joining, Drini runs into the Adriatic Sea.

Catchments area: 14200 km^2
Hydropower potential: 1750 MW

On Drini river are actually in operation three hydropower plants, respectively in:

- Vau Dejes (installed capacity of 250 MW),
- Fierza (installed capacity of 500 MW),
- Komani (installed capacity of 600 MW).

VAU I DEJES HPP

FIERZA HPP

KOMAN HPP

DRINI RIVER

It is already signed the concessionary contract between the Albanian Government and an Austrian company regarding the hydropower plant to be build in Ashta (installed capacity of 48.2 MW).

Meanwhile there are different project proposals regarding the site called Scavica, located in the upper part of Drini river.

The forecasted installed capacity is of about 350 MW.

A public call for an international tender is already launched, regarding Scavica hydropower plant.

MAIN RIVERS AND THEIR HYDROPOWER POTENTIAL

MATI RIVER

Mati river derives from the areas of Burreli and Dibra regions, running into the Adriatic sea.
Hydropower potential: 112 MW

On Mati river are actually in operation the hydropower plants in:

- Ulza (installed capacity of 25 MW),
- Shkopeti (installed capacity of 24 MW).

Some new project-proposals linked with Mati river are actually under the evaluation process.

MAIN RIVERS AND THEIR HYDROPOWER POTENTIAL

DEVOLLI RIVER

Devolli river derives from the areas of Devolli and Korça regions. After its bundling with Osumi river, together run as Semani river, into Adriatic Sea.

Catchments area: 3130 km^2,
Average height: 960m.

It is already signed a concessionary contract between the Albanian Government and an Austrian company, regarding the construction of a three hydropower plants project (in cascade) on Devolli river (installed capacity of 350 MW).

MAIN RIVERS AND THEIR HYDROPOWER POTENTIAL

OSUMI RIVER

Osumi river is the main branch of Semani river.

Catchments area: 2150 km^2,

Average height: 828 m.

A public call for an international tender has been launched, regarding the feasibility study regarding the hydro energetic potential of Osumi river.

It is already a winner company that is proceeding with the feasibility study.

MAIN RIVERS AND THEIR HYDROPOWER POTENTIAL

VJOSA RIVER

Vjosa River derives from Pindi mountains in Greece and runs into the Adriatic Sea.
Vjosa river is the second one, after Drini river, for what concerns the hydro energetic potential.

Actually, on Vjosa river, it is under construction an hydropower plant in Kalivaçi (installed capacity of 90 MW).

Meanwhile a public call for an international tender has been launched, regarding the hydro energetic potential of Vjosa river.

It is already a winner company that is proceeding with the feasibility study.

MAIN RIVERS AND THEIR HYDROPOWER POTENTIAL

BISTRICA RIVER

Bistrica river derives from the Blue Eye Source (Delvina region), running into the Ionian Sea.

On Bistrica river are actually in operation the hydropower plants:

- Bistrica 1 (installed capacity 20 MW),
- Bistrica 2 (installed capacity 5 MW).

LEGAL FRAMEWORK

- Law No. 9663 dt. 18.12.2006 “On concessions”;
- Verdict of Council of Ministers No.27, dt. 19/1/2007 “On the approval of rules for evaluation and concession procedures”, modified by Verdict No.87, dt. 16.01.2008, of Council of Ministers;
- Verdict of Council of Ministers No.150, dt. 22.03.2007 “On the organization and function of Concession’s Treating Agency”;
- Order of the Minister of Economy, Trade and Energy No.536, dt. 27.07.2007 “Regulation for the administration of documents and requests related to concessionary agreements” and “Bonus evaluation criteria”;
- Law No.8987, dt. 24.12.2002 “On the creation of facilitating conditions related to the construction of new power generation resources”;
- Law No.7970, dt. 20.07.1995 “On the arrangement of electricity sector”, modified by Law No.9072, dt. 22.05.2003, recently modified by Law No. 9913, dt. 05.05.2008 “On some additions and changes in Law No. 9072 …”;
- Law No.7764, dt. 2.11.1993 “On foreign investments”;
- Law No.8093, dt. 21.03.1996 “On water reserves”.

THANK YOU!

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