Speech by Mr. Nikos Chatziargyriou, HEDNO's Chairman & CEO in the Conference "Investment & Growth: Building a National Plan"

1. Preface

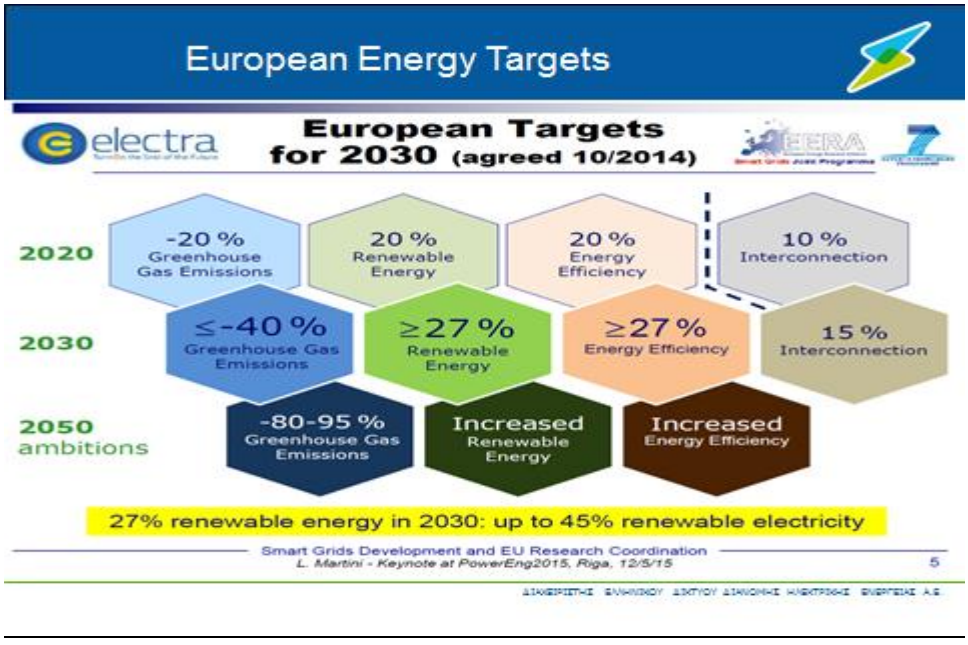
Ladies and Gentlemen, Secretary General, good evening.

I would like to thank the Greek American Chamber for the invitation in today's conference that sets at the center of the dialogue what our country really needs today, a national strategy to recover from the crisis, an integrated plan to attract new investments in order to return our economy to the track towards growth.

Energy is necessary to be at the core of this planning and of our national strategy.

Our national strategy for energy is directly linked with EU strategy.

2.Energy strategy – Europe-Greece



The European energy policy for at least two decades has been oriented towards the achievement of three main goals: the energy in EU should be provided with affordable and competitive prices in order to be environmentally sustainable and safe for all.

The pillar of the goal for sustainable growth is further RES integration, aiming at the increase of their penetration up to 20% by 2020.

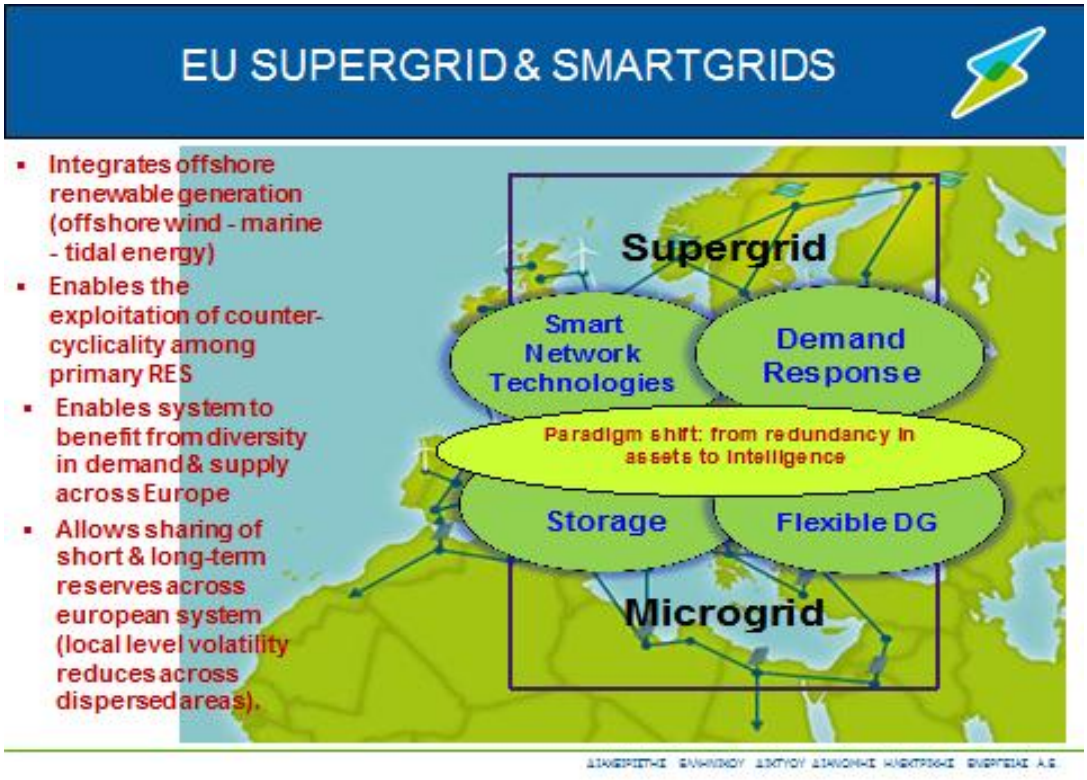
In October 2014, EU countries agreed to the new goal for 27% minimum participation of RES in the total consumption until 2030, a goal that it is interpreted into 45% RES participation in electricity generation.

Within this period, EU has initiated a new public consultation for RES regulatory framework which concerns the strategy for sustainable energy that will be adopted after 2020.

At the same time, in our country the National Strategy for Adjustment to Climate Change has been set in public consultation until Tuesday 8th of December.

The achievement of European goals with a cost-effective way requires a **unified electricity market**, that is, a real **Energy Union**.

3. The transition into SuperGrid and Microgrids



What is the impact of all these developments in the operation of the European Electricity System?

The biggest percentage of the new energy generation from RES (wind and solar) is characterized by variability and weakness of control, since it follows climate conditions.

Variability and limited forecast of solar and wind power generation make the satisfaction of demand in every moment and the network stability more exigent.

So, the electricity markets must become more flexible to absorb greater share of the variable generation.

The main problem is that today's market planning does NOT respond to the distinctiveness of RES, especially referring to their decentralized installation in dispersed and unpredictable generation.

Additionally, the efficient use of RES potential demands its exploitation at the location where the climate conditions allow it, which means greater exploitation of the wind potential in the North Sea and of the solar potential in the southern countries of Europe such as our country.

Electricity transmission networks must be better interconnected creating a large unified network, the European Supergrid, contributing decisively to the Energy Union.

The market unification will contribute decisively to more efficient operation of the European System, since the connection of the regions will be possible with supplementary energy mix and time variations of load and offer will be exploited.

However, the implementation of the vision for the European Supergrid, the Megagrid, will be supported at the same time by the enhancement and smart operation of distribution networks with the application of smart grids. Beyond the role of distribution in the productive absorption of large quantities in dispersed renewable generation, the development of smart grids is further efficient from the point of view of durability and safety of the energy system operation.

With the use of smart grids technologies, advanced local networks that balance consumption with local generation and the possibilities

of remote controls in real-time will be created enhancing durability and safety of the system operation enabling the integration of dispersed generation. Microgrids, which provide high level safety services and reduction of cost to the final consumer, are an example of advanced types of distribution

4. Their contribution to economic development

Apart from the most important benefits for the consumer, the environment and the energy market as mentioned above, Smart Grids can contribute significantly to economic development.

According to Eurelectric calculations, the investments that will be implemented only to electricity distribution networks in Europe will reach 400 billion euros until 2020.

The total number of employment positions expected to be created directly and indirectly from the development of Smart Grids, that is, Smart Energy Jobs, are calculated to 3 million approximately within the whole Europe.

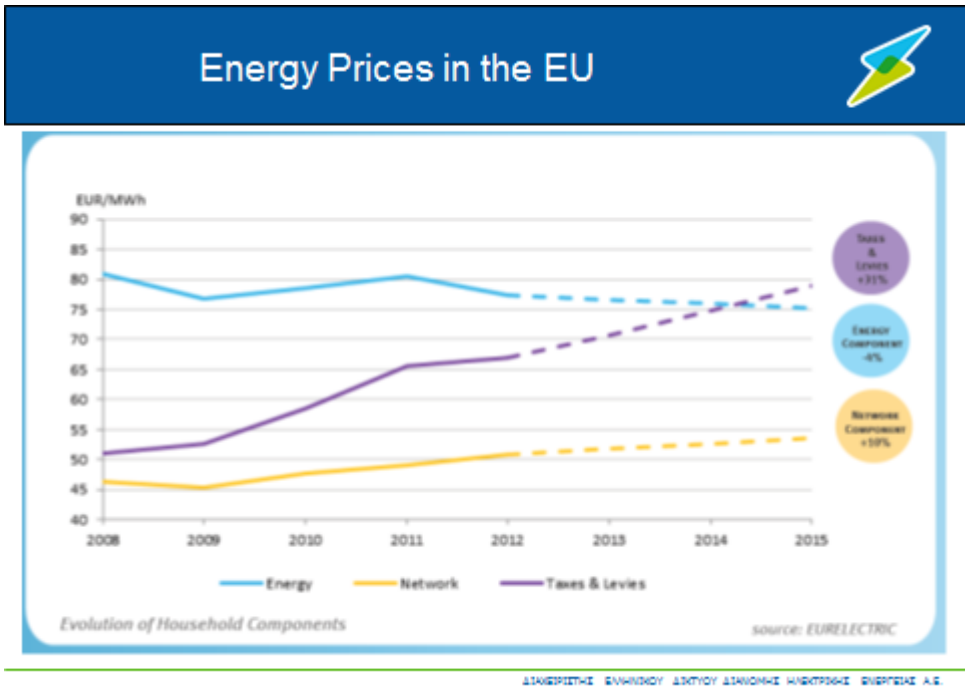
At the same time, according to relevant studies, 25 sectors of economy benefit from the development of Smart Grids, from aeronautical industry, car industry and banks to wholesale trade, transportation sector and logistics.

Smart Grids turn houses into Smart Homes, Cities into Smart Cities and Transportation to Smart Transportation with very important benefits such as the reduction in consumption from 5 up to 15% and equivalent reduction in electricity bills from 5 up to 20% for residential customers and from 2 up to 5% for businesses.

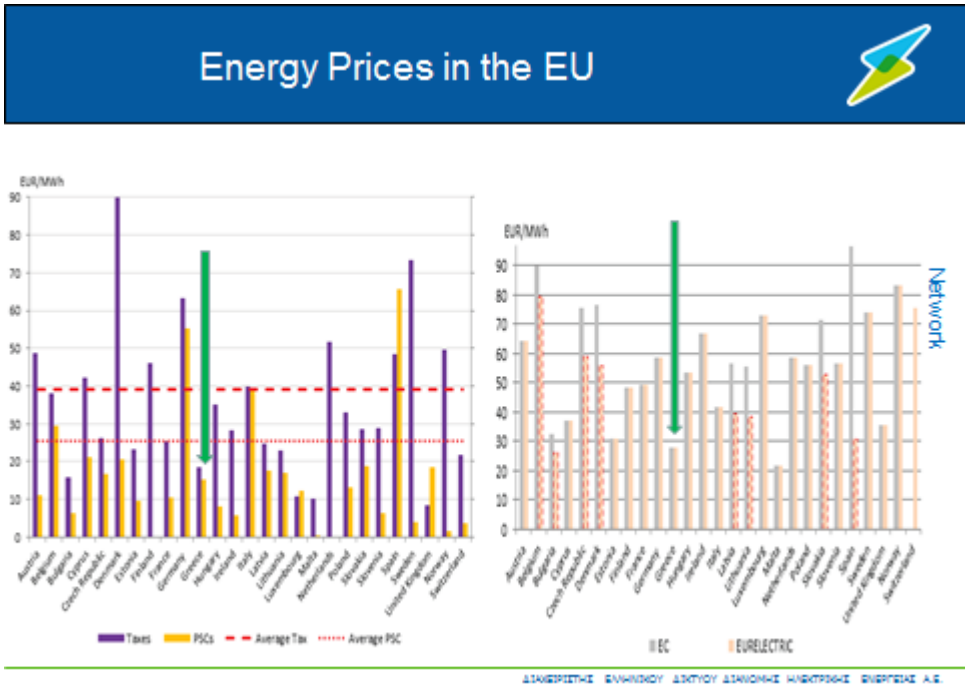
Smart Grids are considered as one-way direction towards the transition into an energy market that combines the achievement of high environmental standards and high level of services in low cost.

4.Energy cost in Greece

Since the issue of the cost constitutes an indispensable part of energy strategy, I would like to make a brief reference to the latest (2012) official data of Eurelectric - the European Union of major Electricity Corporations.



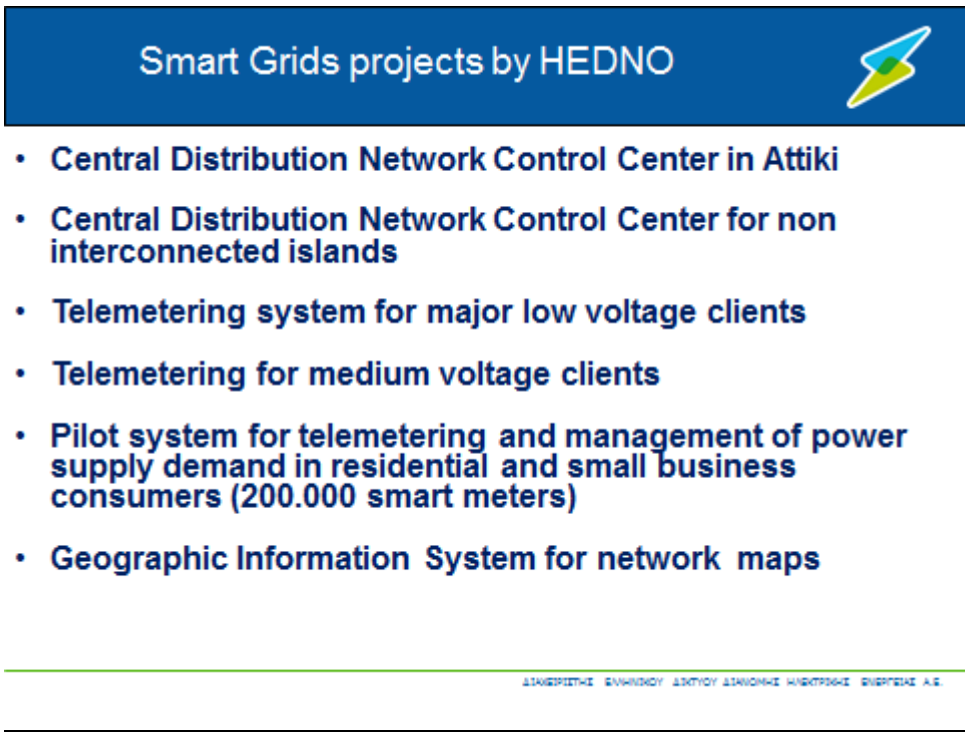
As it is concluded in European level, while the power generation cost is reduced (due to RES with zero operation cost) and the network cost is slightly increased (to achieve efficient RES connection), the cost of taxes and subsidies has been increased significantly.



Additionally, from the second diagram it is concluded that the energy cost in Greece in Euros per MWh for residential consumer is lower than in other countries as Germany or Spain and even lower from the European average rate.

Respectively, in the third diagram, you can see that our country is significantly cheaper in the sector of network cost (including Transmission and Distribution), while I would like to add that relevant research of the European Committee has concluded that Greece has the lowest price of the distributed kWh in absolute value.

5. HEDNO's infrastructure projects



Concluding, I would like to return to the main issue of the panel, that is, whether our country can constitute an energy hub. I would like to express my belief that Greece can constitute the hub for the European energy market by using its geostrategic position, its rich RES potential and by implementing the necessary strategic energy infrastructure projects.

In the crucial sector of networks, as Chairman of the Hellenic Electricity Distribution Network Operator, HEDNO, I would like to say briefly that within this period significant strategic projects are implemented in our country for our transition into the era of Smart Grids aiming at the upgraded quality of services provided to the consumer with simultaneous reduction of cost.

Indicatively, I would like to mention that:

- We implement the project for the interactive electronic representation of our Distribution Network, that is, our maps are represented in digital data for more efficient development of our networks

- We modernize the Distribution Network Control Centers with new remote controlled technologies while at the same time, we also

upgrade the relevant Centers in the non-Interconnected Islands for better inspection and operation of the energy market in the islands

- We proceed to the implementation of multiple telemetering systems in Low and Medium Voltage for the detection of faults and the reduction of their restoration time.

-finally, we proceed to the implementation of the pilot system for telemetering and management of power supply demand with the installation of 200,000 new smart meters and we study their expansion in the whole Greek territory, so as to provide the consumer with complete transparency for his consumption cost and the possibility for its formation.

At this point, I would like to add that, apart from these strategic projects, HEDNO gives great emphasis to innovation; today, I am in the pleasant position to announce that the photo that represents Greece in the World Summit for the Climate in Paris is the TILOS project in which the Corporation participates; it refers to the development of innovative applications for optimum integration of energy storage accumulators in the microgrid of Tilos with the increased integration of RES.

I would like to thank you for your attention and I hope that I will have the opportunity along with the other speakers to analyze further these significant issues in the panel that will follow.