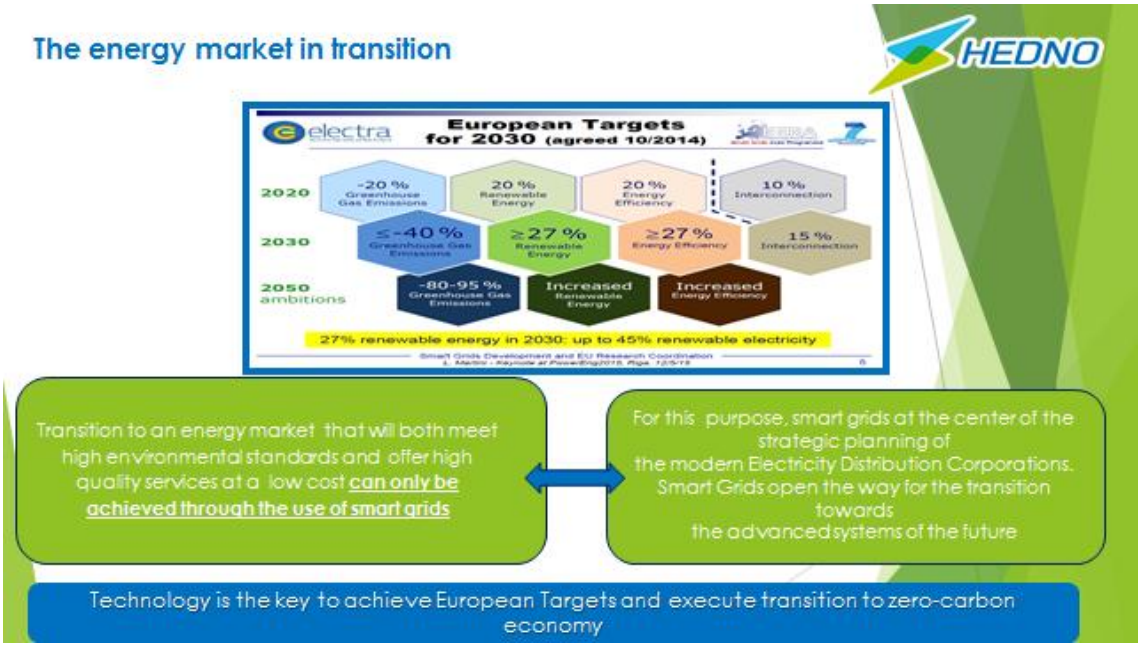
N.Chatziargyriou:"HEDNO leads the transition towards a smart energy market"

Good afternoon, Ladies and Gentlemen,

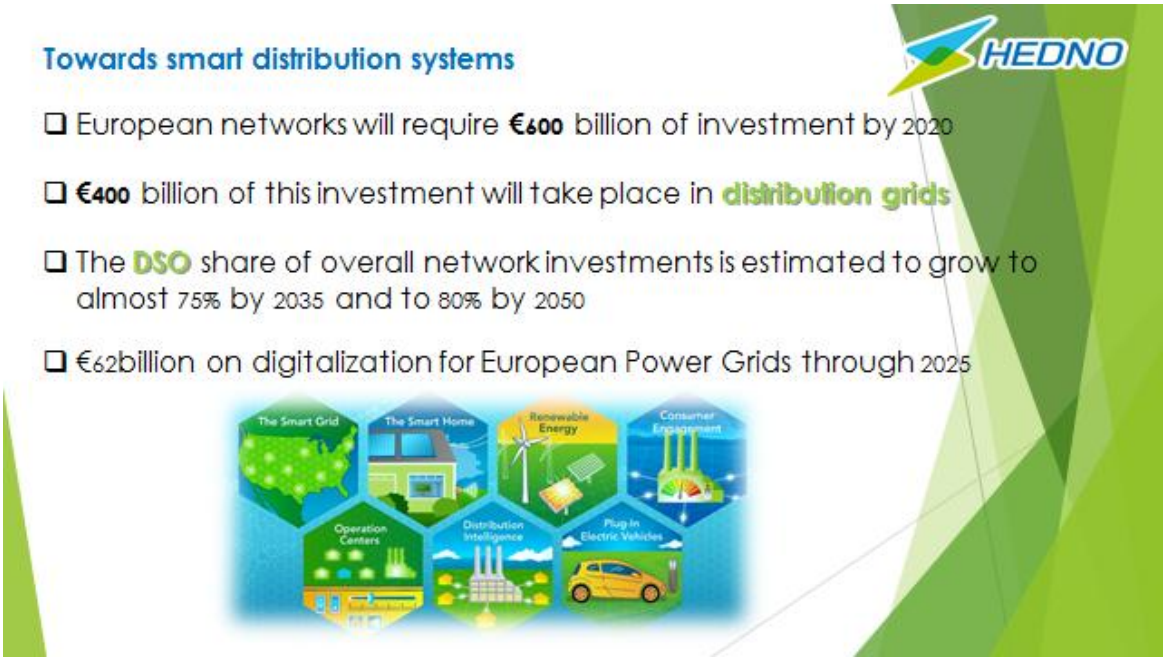
I would like to warmly thank the American-Hellenic Chamber of Commerce for the opportunity to participate in today's Conference, which has become an institution and dynamically transfers the messages for the next day in the Greek economy. As very properly mentioned in the title of the conference "Reshaping the Economy", the aim is to examine how we can reshape the Greek Economy through innovation, technology and extroversion and reach successful strategic choices today that could lead us to a better future.

Ladies and gentlemen, the electricity field is of crucial importance for the growth of Greek economy and the collective effort for effective reforms. This field today goes through a transition period leading to radical changes both in terms of technology as well as in terms of business.

In the few minutes at my disposal, I shall try to share with you HEDNO's vision relating to the development of necessary infrastructures with the maximum possible benefit for the citizens, the economy, and the environment, in this continuously changing environment.



The starting point for the drastic change in the European energy market is the targets set by the European Union for the reduction of emissions, energy adequacy and the increase of Renewable Energy Sources penetration. Technology is the key to achieve the transition to zero-carbon economy. Managing the climate change affects to a very big degree the energy market globally.



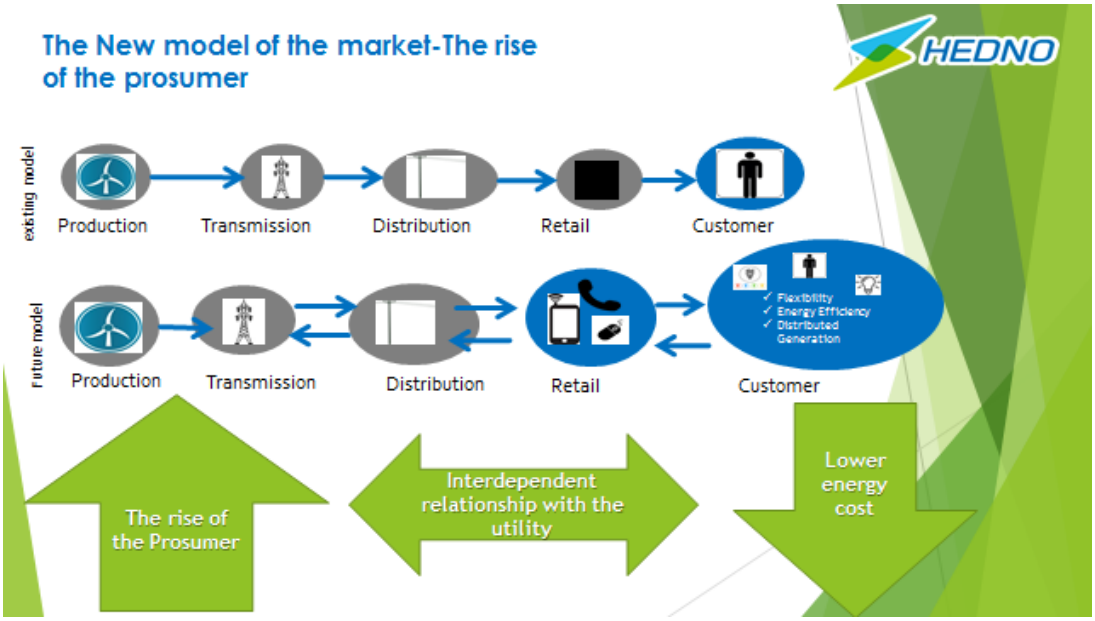
Smart Grids are today the center of the strategic planning of all modern electricity distribution corporations, as it is an irrefutable fact that the transition to the energy market of the future combining **high environmental standards with high quality services at a low cost can only be achieved through the use of smart grids.**

The investments required to achieve those targets are impressive. European Networks will require an investment of €600 billion by 2020; €400 billion of this investment, i.e. 2/3rds, will be implemented for the Distribution Grids. The investments on Distribution Grids will continue to grow and are expected to increase their share in all investments to 75% by 2035 and to 80% by 2050. Moreover, the digitalization of European Grids will require investment funds of a total estimated amount of EUR 62 billion by 2025.

At the same time, the Greek electricity market is affected by the European trends as the Greek legislation is adapted to the policies of achieving the EU targets. The expected mass RES penetration that will generate surplus of power restricts the inclusion of thermal units and reduces the possibility of investment amortization of new investments on conventional generation.

In this environment, the market is going through an intense re-organization process whose main features are:

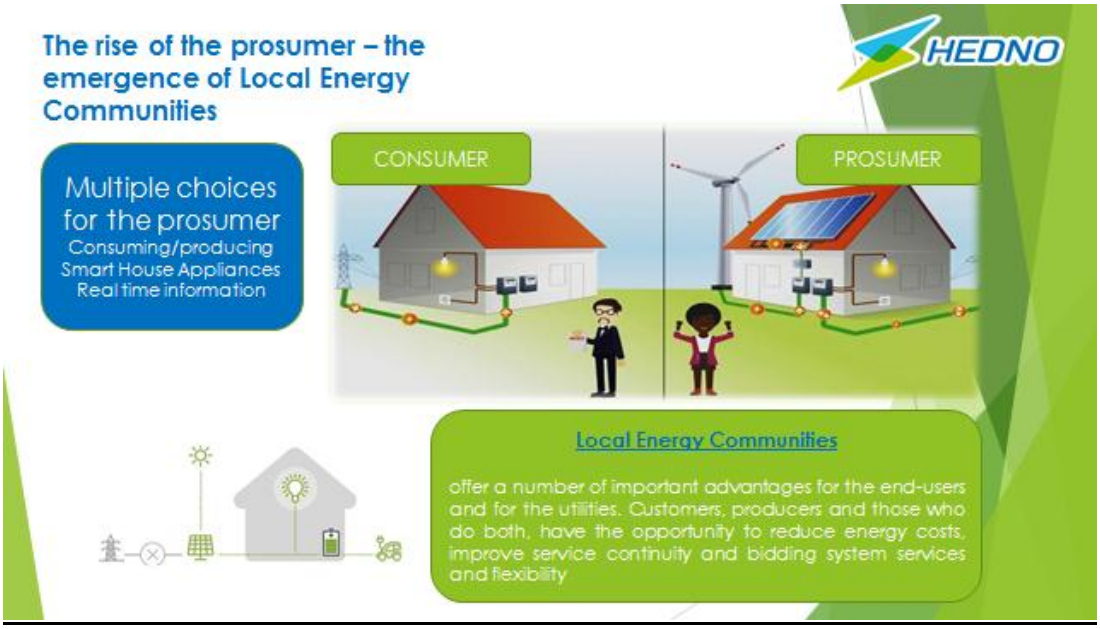
- ✓ introduction of new players restricting the share of PPC;
- ✓ the changing role of HEDNO, according to the new Grid Operation Code;
- ✓ the changing role of the other key institutional bodies of the market, IPTO, LAGIE, Energy Stock Exchange etc;
- ✓ But also the implementation of the EU target model.



The new market model, which is now being shaped, transforms the traditional model of the one-way flow of production-transmission-distribution-retail-customer into a new multi-complex two-way model**, with the active participation of consumers, based on two-way communication and a flow of big volume of information.** In this new model, the Operator plays the **central role,** as it is required to manage the more and more increasingly dispersed energy sources, dispersed renewable generation, active consumers, charging of electric vehicles etc with the possible establishment and operation of local markets etc.

The operation of the distribution system in such a complex environment requires the collection and management of a number of data from smart meters and various control devices and sensors installed in the grid. Smart Grids, therefore, change the role of Distribution Corporations, such as HEDNO, which are transformed from traditional electricity grid operators into operators

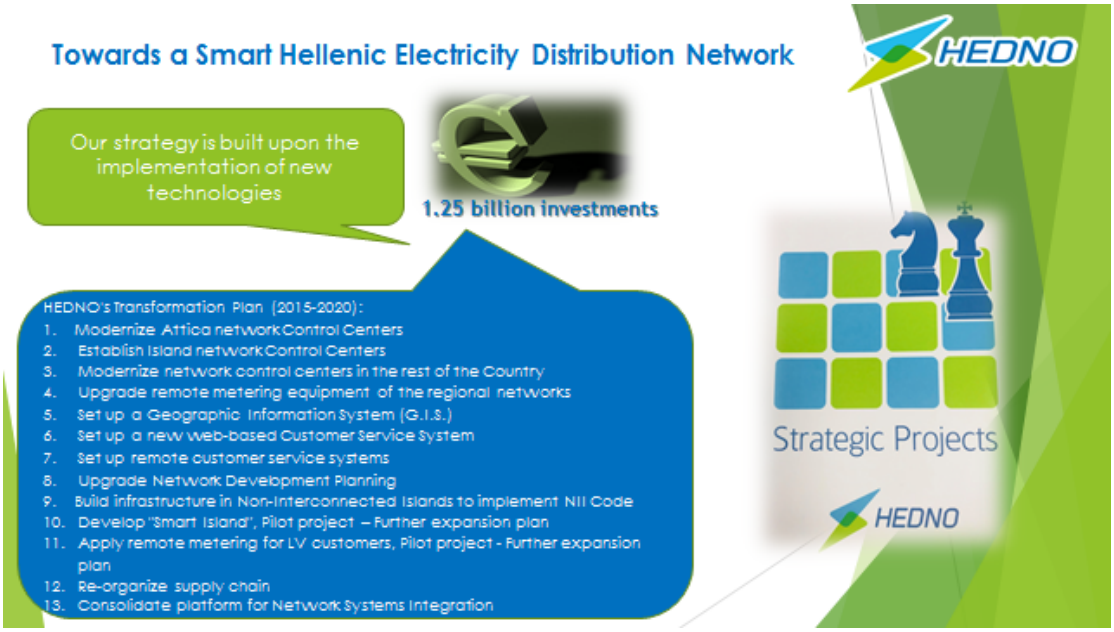
of complex smart systems with a big volume of data. These data are utilized - as you can see in the slide - in the entire chain, from maintenance, development programming, and operation up to consumer's service aiming at the direct improvement of safety, efficiency, quality of provided services and environmental impacts of the comprehensive operation of the Electricity Distribution Systems.



In the modern distribution systems, consumers will be able to be informed at any given moment and in real time about their consumption and the individual consumptions of each appliance. With such detailed knowledge, the consumer is able to **adapt his/her energy behavior, maximizing the financial benefit.** The continuous development of the Internet of Things will allow the interconnection of more and more residential appliances with the Internet, enabling the consumers to remotely manage their appliances 24/7 (via special mobile, tablet etc applications).

Furthermore, the consumer can also be a producer (prosumer is the new term to describe this double role) and co-shape electricity production and consumption. With the development of local Renewable Energy Sources, i.e. the application of net-metering, the consumer can produce electricity using photovoltaics and supply the grid with non-consumed energy.

Following the initiative and relevant draft law of the Ministry of Energy, energy communities shall soon be a new reality for the Greek energy market which, with the active contribution of the Operator, will contribute to the better organization and operation of the dispersed energy sources and the growth of the local entrepreneurship and new economic and social activities.



Bearing the exclusive responsibility for the Operation of the Electricity Distribution Network in Greece, including the islands, and despite the adverse economic conditions in our country and the suffocating institutional environment, HEDNO is intensively being prepared for the successful transition to the new market model. It continues to implement its strategic plan for investments in Smart Grids, focusing on relevant innovative technologies to be able to upgrade and modernize the key infrastructures of our energy market.

Ladies and Gentlemen,

HEDNO guides the market via the modernization of its Grids towards this new model, facing at the same time many and complex challenges.

We are determined to make our vision a reality, to transform our Network into a Smart System that offers multiple benefits. To this end, our operational planning incorporates strategic projects which spread over a variety of modernization activities, ranging from grid telemetering to advanced automation systems.

We aim, through our investment plan amounting to €1.25 billion by 2020, to transform the Hellenic Grid into a Smart System; we create the appropriate conditions and the infrastructures for "clean" and cheaper electricity, for upgraded services for all Grid users. These investments do not include the installation of smart meters all over Greece, which is budgeted to an additional amount of €1.2 billion and which will be the basis of many of the above developments. HEDNO is already working on the business model for this project which will be the biggest investment in the field of Electricity Distribution. Finally, at this point, I would like to underline that Smart Grids will create new business opportunities for hundreds of Greek enterprises, especially small and medium ones, that will be able to develop new applications and solutions for the transition to this new landscape. Through Smart Grids, innovation and research, we aim at a better future for Greek citizens, the environment and the Greek economy.

Thank you very much.