



N. Chatziargyriou: "The transition to a new market model through the Networks"

Good afternoon, Ladies and Gentlemen,

My sincere thanks to the American - Hellenic Chamber of Commerce for inviting me and for giving me the opportunity to be a part of this Conference today, a conference that is more relevant than ever as we all share the same feeling of uncertainty of what lies ahead of us in the Greek economy.

This Conference offers us all a glimpse into the future. A chance to see how the current strategic choices that we make in the midst of an ever-changing and extremely demanding environment could lead us to a better future.

Ladies and gentlemen, electrical energy is pivotal to the Greek economy and the efforts for growth.

Electrical energy is going through times of dramatic changes, both in terms of technology and business.

Within the next few minutes I will attempt to share with you the vision of HEDNO for the deployment of infrastructure that will maximize the benefit of people, the economy and the environment.

The European energy market is already going through some revolutionary changes, whose starting point is the targets set by the European Union for the reduction of gas emissions, energy efficiency and the increase of Renewable Energy Sources penetration.

Technology is the key tool that will ensure transition to zero-carbon economy.

You may have been hearing the term 'Smart Grids' quite a lot lately in discussions revolving around the energy sector. In fact, today, we are experiencing a true revolution in energy, as has been the case in the recent past with telecommunication networks.

Today, Smart Grids are at the heart of strategy planning of all active DSOs as the transition to the energy market of the future will combine **both compliance with high environmental standards and high quality services at a low cost can only be achieved through Smart Grids. There is no doubt about that.**



Investment funds required to transform this vision into reality are exceptionally high. From a total of about 600 billion euro required to invest in European networks by 2020, 400 billion euro, that is, two thirds of the entire amount, will be implemented in the Distribution Grids. Investments will be shifting toward the Low cost Networks as DSO share in the overall investment is estimated to reach 75% by 2035 and 80% by 2050. Moreover, digitization of European Grids will require investment funds of a total estimated amount of 62 billion euro by 2025.

At the same time, The Greek electrical energy market cannot be left unaffected by European trends as national laws have to transpose EU laws in order to reach EU targets.

The domestic market is also affected by the pessimistic prospects for electrical energy demand, a fact that can be explained by the continuing economic recession, but also by the need for consumers, the industry and businesses to be provided with lower energy rates.

Also, RES penetration generates a power surplus and an adverse impact on possible investment amortization in conventional power generation.

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

- ✓ New players in the market that cut down PCC share and change the role of HEDNO and other market institutions such as IPTO, LAGIE, etc.
- ✓ Launching of NOME auctions
- ✓ Implementation of a single European market model (target model)

HEDNO, on its part, being the sole responsible Operator of the Electrical Energy Distribution Network across both mainland and insular Greece, has decided to invest in Smart Grids and to all relevant technology innovations, in order to help upgrade and modernize the heart of energy market. And all this, despite the adverse economic circumstances we have been experiencing in our country.

Smart Grids rebuild the role of DSOs, such as HEDNO, and transform them into companies that are called to manage a huge amount of data thus becoming operators of a complex energy distribution network that will incorporate conventional networks but also energy sources and flexible loads.

Deployment of Smart Grids signifies HEDNO's transformation. We are no longer a traditional grid operator; we are evolving into a data centric company managing big data - as you can see on the slide - operating the entire



supply chain, from metering data drawn from electronic meters to readings taken from every single point in the Network.

DSOs leave the role of traditional electrical energy network operators to take on the new role of complex, intelligent system operators that handle big data.

The new market model is here to take the place of the conventional one, namely, energy generation-distribution-retail market and customer, as the new, complex, interdependent model is emerging, **engaging consumers into the market, creating interactive communication and flow of a large amount of information.**

The electrical grid of the future intelligently integrates operations carried out by all connected users - consumers and/or producers to ensure that the supply of electrical energy is efficient, sustainable, cost-effective and safe.

Consumers can now be producers as well ('prosumer' is the new term that best describes this dual role), reshape and make decisions on the production and power usage jointly with the operator.

What is more, the deployment of renewables makes it even more important for networks to keep up with developments in order to enable interdependent energy transmission. If, for example, consumers produce electrical energy by means of photovoltaic installations they should be able to provide the network with the surplus of energy.

Electrical energy consumers, all of you, that is, can now engage actively in the production-usage cycle.

Smart Grids will enable users to know at any given time whether they consume self-produced energy or they use energy supplied by the network.

All of this generates the need for intelligent management of a great amount of data and information, which should be communicated between consumers and grid operator.

Consumers will also be able to know at any given moment, real-time, the amount of usage and the individual usage of each of their devices. This detailed information enables consumers **to regulate their energy behaviour, thus maximizing their financial benefit.**

At this point let me stress that the continuing development of the 'Internet of Things' will allow for more and more devices to be connected on the Internet, which will offer consumers the possibility to manage them themselves, on a 24-hour basis, even remotely (through mobile apps installed on their phone, tablet, etc.)



In short, Smart Grids offer consumers quite a lot of options so that they benefit from high quality energy supply at a low cost, keep up-to-date in real time and become active stakeholders in the energy market.

Let me remind you the case of telecommunication service providers and what technological advancements did for them; within less than a decade, they managed to run the distance of providing just a landline to offer all-inclusive, fully customizable service deals (e.g., triple play). This example reflects what Smart Grids can do: transform and modernize the energy market and the services available to consumers.

Ladies and Gentlemen,

Our country is not far from embracing this new market model.

HEDNO is moving rapidly toward this direction.

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 systems to advanced automation ones.

Our investment plan amounts to 1.25 billion euro, funds that we aim to pump into the Greek Network by 2020 in order to transform it into a Smart System; we create the appropriate conditions and build the required infrastructure to get 'clean' and more economical electrical energy, upgraded services for all Grid users and stimulate the internal economy by, let me emphasize on this, creating new business opportunities for hundreds of Greek businesses, especially small and medium-sized ones that could develop new applications and solutions to help with the transition to the next stage.

Technology and Smart Grids are our allies in our effort to achieve our main goal: a better future for the people of this country, the environment and the Greek economy.

Thank you very much.