

Speech by HEDNO's Chairman & CEO, Mr. Konstantinos Zontanos, at the Conference "Recent Developments in the Greek Gas and Power Markets", 16<sup>th</sup> of December.



Ladies and Gentlemen,

Good evening.

### Introduction

I would like to begin my speech by thanking Mr. Kostas Andriosopoulos for the invitation and for the opportunity that I am given to present HEDNO's vision on Grids within the framework of a contemporary and fully liberalized energy market.

The current decade is dedicated to energy.



Today, the developments in the energy sector are rapid and similar to the period between 1990 and 2000 when the telecommunication sector experienced rapid developments that led to strong growth.

European goals for the energy market that include the significant reduction of greenhouse gas emissions and the limitation of climate change, as well as the sufficient energy supply of Europe, have caused series of drastic changes in the market.

In our country, the energy strategy adopted by the State is harmonized with EU goals, thus we implement multiple reforms that will lead to further liberalization and modernization of the market.

So, during the last years, enormous changes have taken place, which will be intensified in the near future in the energy sector in Greece as well.

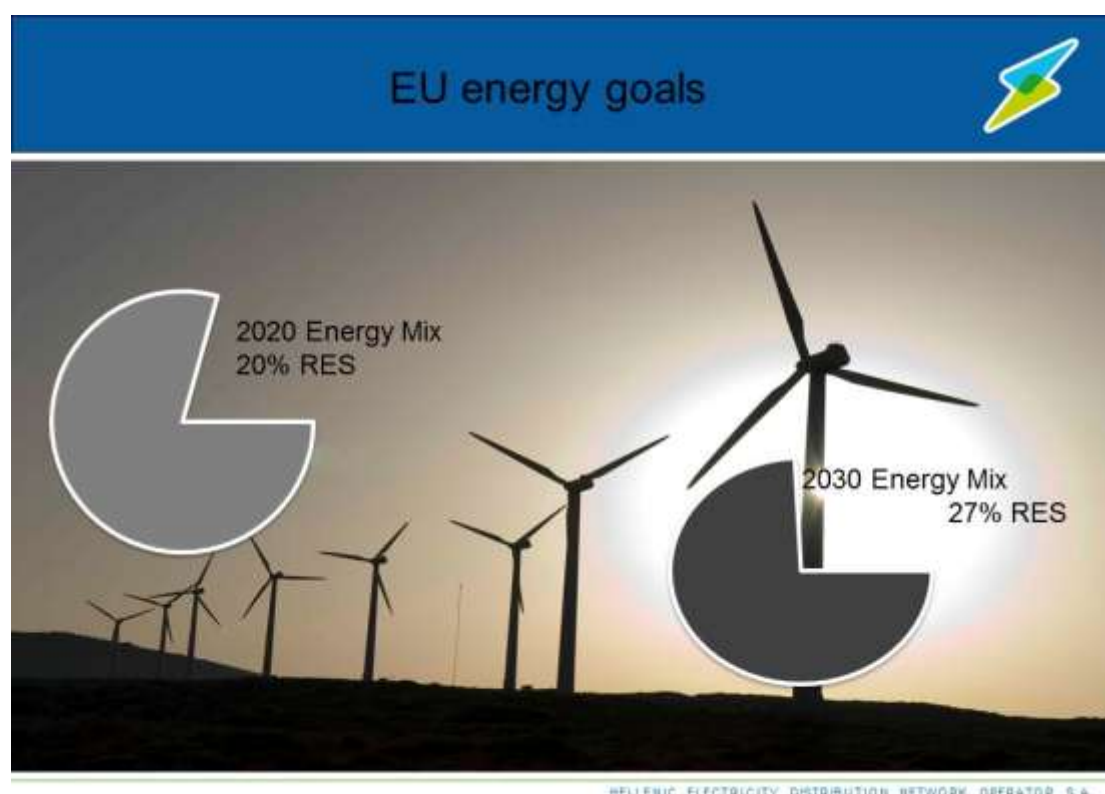
## Smart Grids

Representing HEDNO, our county's Distribution Network Operator, I would like to share with you our corporation's vision within the new map of the energy market, as it is transformed by the reforms that I have mentioned.

Initially, I have to point out that the Grids have a leading role in the market operation.

They constitute an indispensable part of the market and according to EU strategy, the goals set for the environment cannot be achieved unless these Grids are transformed into Smart Distribution Grids.

Grids play a decisive role in the achievement of goals for climate change and energy sustainability within the framework of "EUROPE 2020" strategy.



The assurance of 20% energy from renewables adopted by EU in the following years can be assured from the exploitation of the dispersed generation potential through the grids.

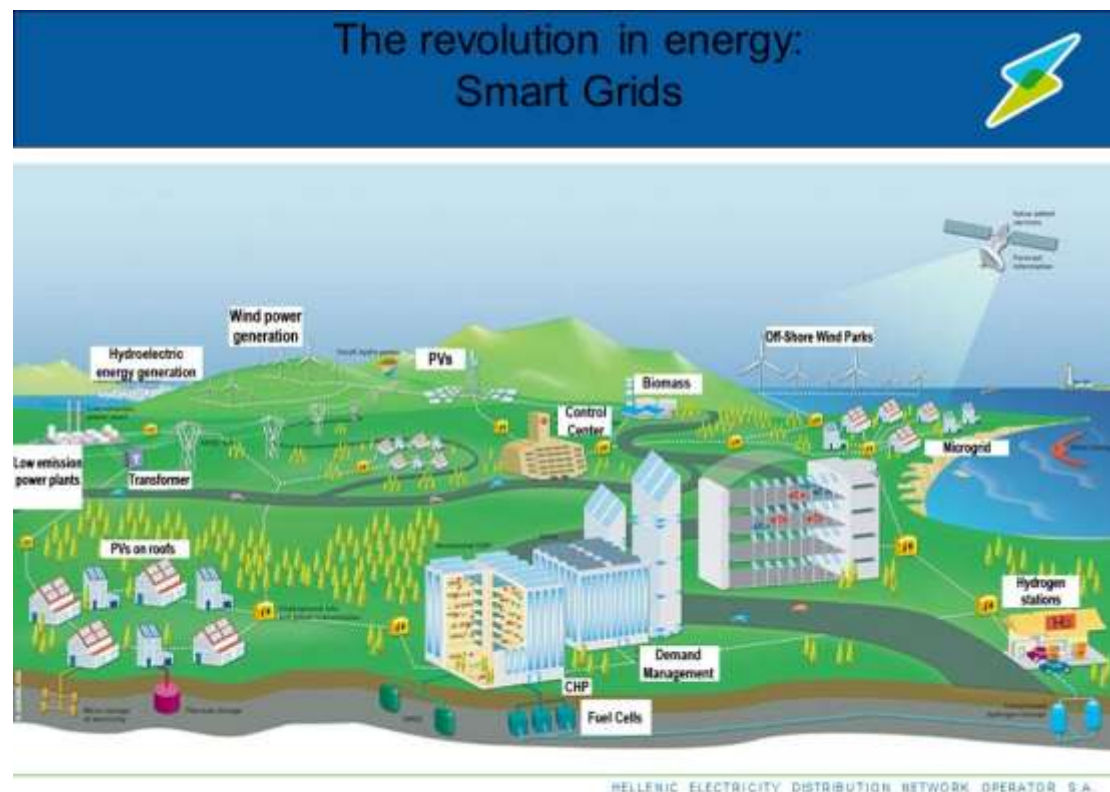
However, their modernization and gradual evolution into “Smart Grids” constitute a necessary condition, so as to contribute to more rapid and efficient penetration of RES.

The wider RES penetration in the energy balance with security of supply can be achieved only through Smart Grids.

New technologies provide us with solutions in serious technical problems that arise from the penetration procedure of RES into the Grids.

However, technology is also a valuable ally in the energy sector. This is underlined by the fact that EU has elaborated a Strategic Energy Technology Plan.

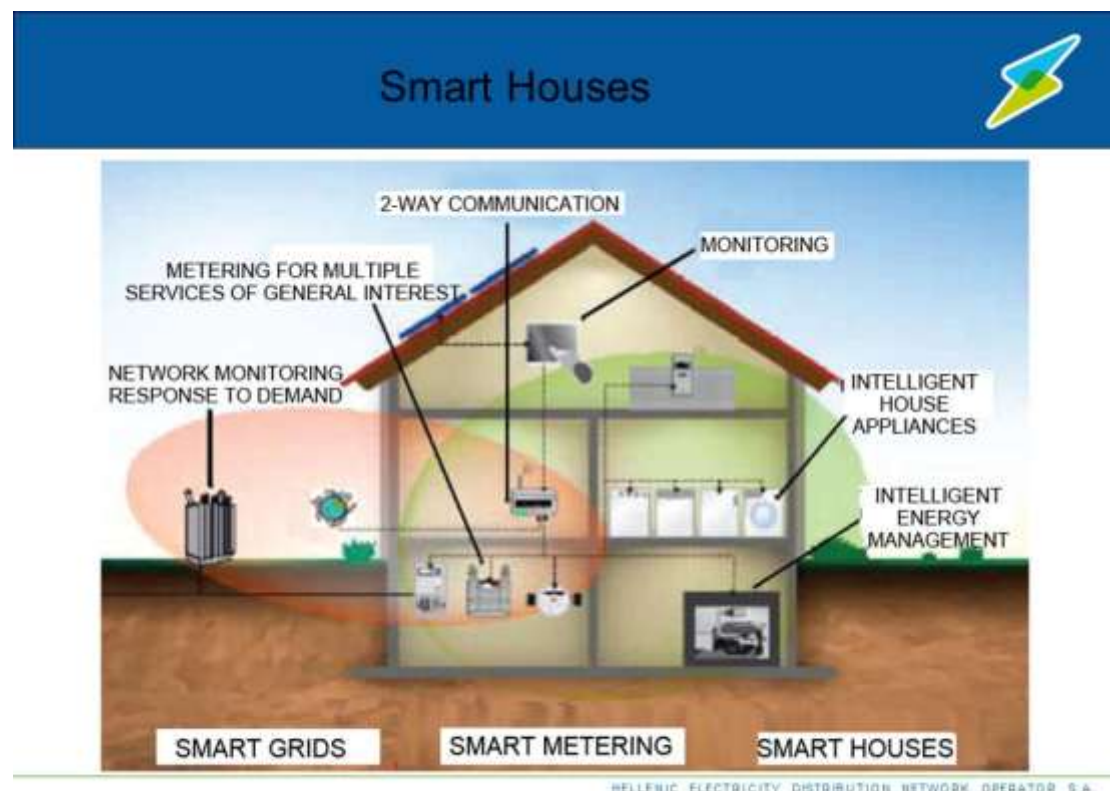
With technology as an ally, the new Smart Grids provide the necessary tools that allow further penetration increase of RES generation plants in the energy balance with security of supply.



The contribution of Smart Grids is crucial in the increase of penetration percentage from RES generation plants, mainly due to the possibility provided for direct monitoring of their operation in real-time and the management of power insertion in Electricity Networks.

**After what I have mentioned above, I believe that it is quite clear that Europe will not be able to fulfill its energy goals, unless it promotes investments in its Grids in order to transform them into Smart Grids.**

According to Eurelectric, the investments in EU electricity distribution networks will reach 400 billion Euros by 2020.

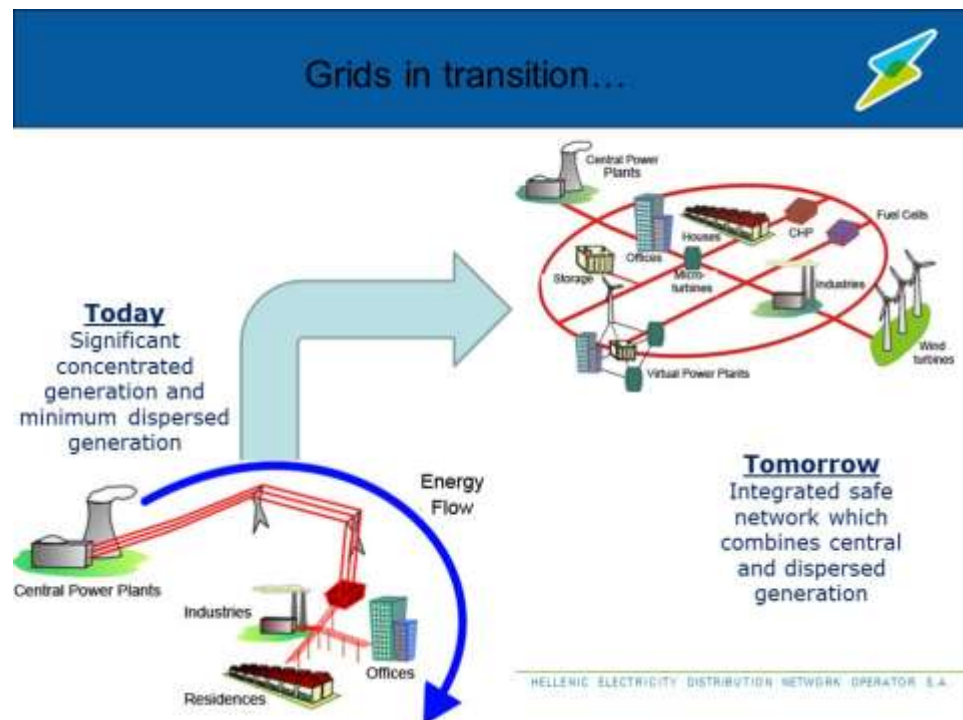


However, I would like to add that Smart Grids serve another medium-term objective.

The upgrade of services provided to consumers and the enhancement of market competitiveness.

With smart grids and smart meters, each consumer can manage the energy consumption in a more efficient way, so as to achieve significant savings and lower costs.

Metering and billing are more accurate, while there is greater flexibility and a wider range of tariffs.



The Network operator undertakes better control and inspection of its networks, error and faults detection is easier, while the quality of supply provided is certainly improved.

### [HEDNO and Smart Grids](#)

HEDNO, within the framework described above, adopts a strategy totally adapted to long-term energy goals defined not only in national but also in European level.

HEDNO implements today projects that will form the energy market in the near future.

We build today the infrastructure of tomorrow. Today, we build the foundations for Smart Grids.



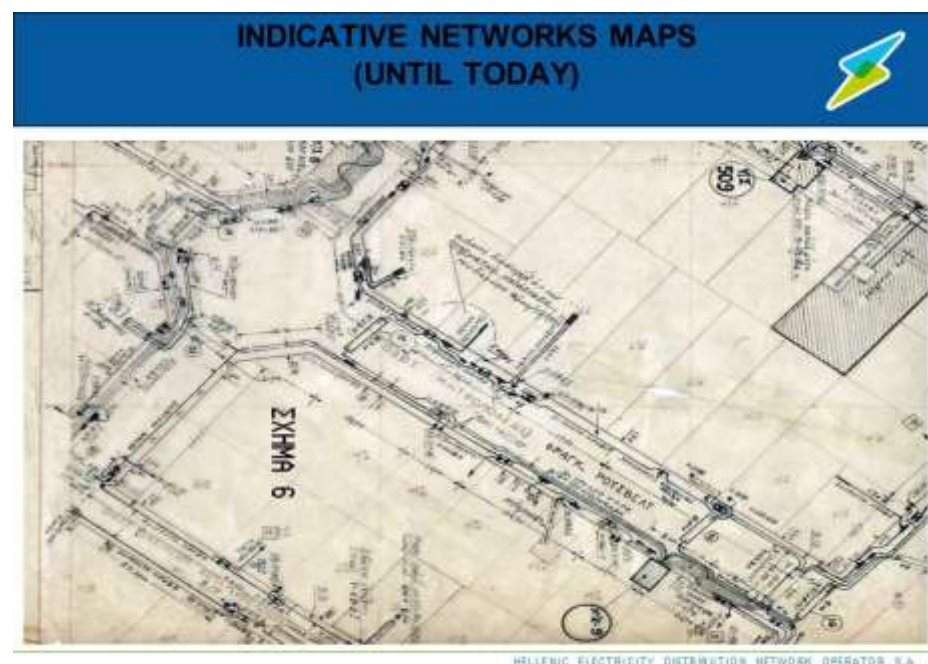
We upgrade our Network through multiple projects that are currently in progress.

Our corporation's midterm planning gives full priority to the establishment of a modern Network.

**I would like to point out once more that this is a primary objective, because the vision for a modern energy market passes through Networks.**

**HEDNO realizes investments that will surpass 1.5 billion Euros by 2018 for growth, modernization and enhancement of the Network.**

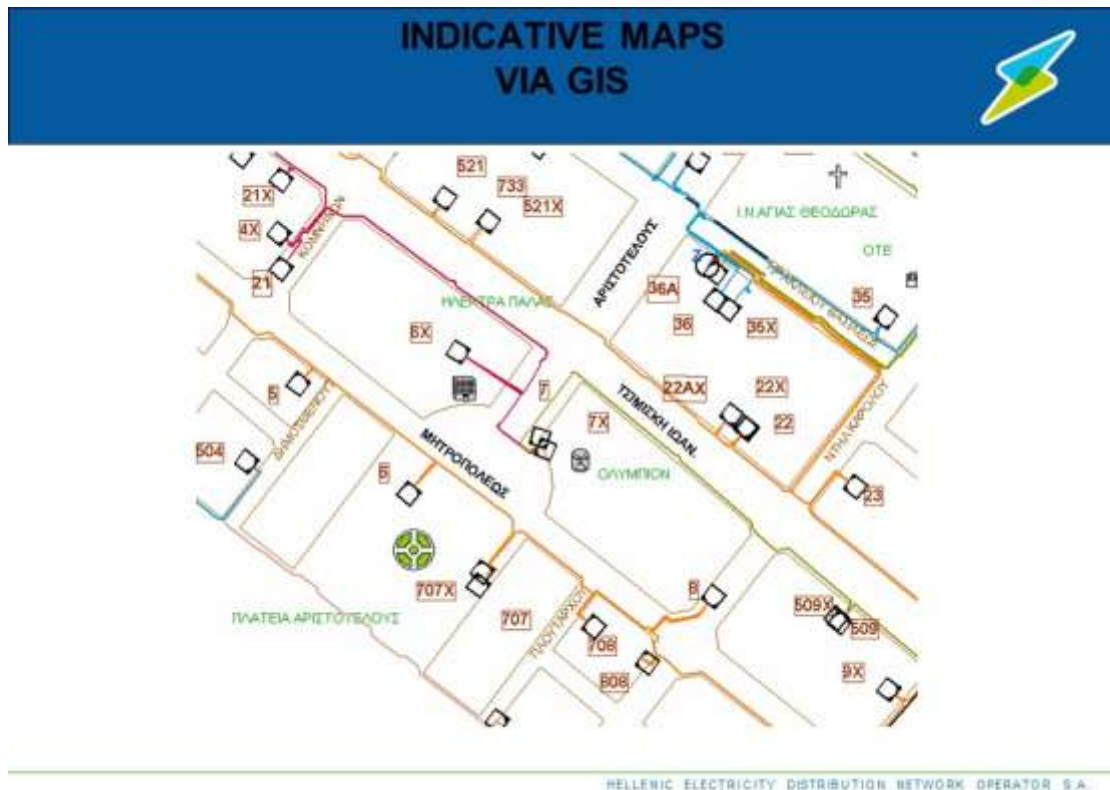
Indicatively, I will mention some of the major projects that we implement:



We introduce the new **Geographic Information System (GIS)** that constitutes the main “pillar” of the required infrastructure for the support of many Smart Grids applications.

With this system, we aim at the representation of our network maps into digital data. These files will include descriptive information for the Network data in relation with their geographical position.

The new System will provide us with the possibility to process rapidly mapping and descriptive information of our Networks which will lead to the upgrade of Distribution technical activities.



The benefits will be transferred to all Network users through upgraded provision of services.

As mentioned above in my speech, our vision for a Smart Distribution Grid requires the simultaneous implementation and coordination of many projects.

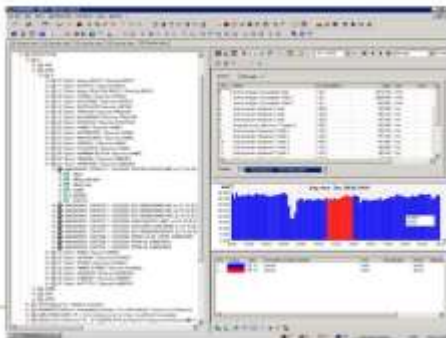


## M.V. Telemetry System



### ✓ M.V. Telemetry System

- In operation since 2009
- Management of the 23% of the distributed energy
- Communication through GSM/GPRS
- 13,500 MV Consumers/Producers



Saving of resources equivalent to 360 A/H daily or 100,000 A/H annually

At the same time, the **M.V. Telemetry System** is already set into operation and manages the 23% of the distributed energy.

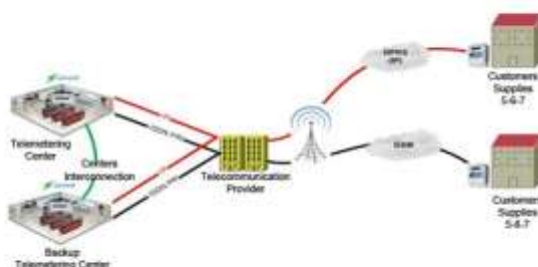
Telemetry, with the use of GSM and GPRS, refers to 13,500 M.V. consumers and producers.

## Telemetry system for major L.V. customers 400/230V



### ✓ Telemetry system for major L.V. customers

- Beginning of implementation 2/2013, 26 months time period for completion
- 2 identical Central Systems
- Communication via GSM/GPRS
- 60,000 supply meters:
  - No 5 85 KVA
  - No 6 135 KVA
  - No 7 250 KVA
- 5,000 supply meters:
  - No 3 35 KVA
  - No 4 55 KVA




At the same time, the **Telemetry System for major LV customers** is under implementation.

The System includes two similar Central Systems; the communication is realized through GSM and GPRS and will include 60,000 supply meters.

Also, we proceed to the implementation of a pilot system for Telemetry and Management of power supply demand in residential and small business consumers and application of “smart grids”.

**SMART METERS-THE BASIS  
OF SMART GRIDS**



Electronic metering device with the possibility to communicate with other devices.

The device measures the energy consumed and sends the information to the system from where they end up to the customer/producer informing about the consumption/generation and its cost.

**Smart meters constitute the main coefficient for the development of smart grids. Smart Grids are directly attached to smart meters.**

HELLENIC ELECTRICITY DISTRIBUTION NETWORK OPERATOR S.A.

The relevant tender has been announced and we are waiting for the submission of offers by the interested manufacturers until the end of the next month.

With this project, regions such as Xanthi, Lesvos, Lefkada, Attica, Thessaloniki and certain islands of Cyclades such as Santorini, Kythnos and Milos will acquire 200,000 smart meters in total.

These meters will change the energy consumers' habits contributing to cost saving, but also will reduce significantly carbon dioxide gas emissions.

**This pilot project is of decisive importance for the gradual application of smart grids in the whole Greek territory and the replacement of approximately 7 million existing meters with Smart Meters. The value of this project is expected to surpass 1 billion Euros.**



### Conclusion

The role of the energy market is crucial for the successful achievement of our country's strategic growth through new investments and the establishment of modern infrastructure.

Particularly within such difficult and uncertain period that our country faces today, the energy market and all parties involved have major responsibility in the effort to recover from the economic crisis and to initiate our economy.

Events similar to today's Conference contribute significantly to the fulfillment of our common goals and our common vision for a modern market through dialogue and exchange of views.

I thank you for your time and I wish happy holidays to all of you.