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THE ENERGY CONSUMER; THE CHANGING ENERGY MARKET AND ITS REGULATION (PROSUMERS, END-USERS PRICING, CHANGING ROLE OF DSOs)

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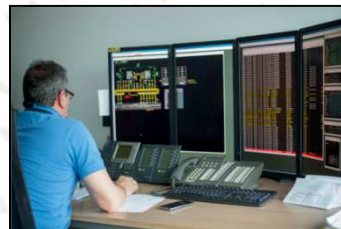
SOME CHARACTERISTICS OF PROSUMERS

- **Prosumers:** agents that *both consume and produce electricity*
 - no limit for energy consumed / produced, or ratio energy produced / energy consumed ?
 - agents are both households and industrial or commercial ?
 - no limits for installed power?
- **Three strategies for integration in grid / market:**
 - constrain prosumers
 - enable prosumers
 - transition to prosumers (incremental or structural)
- **Role:**
 - active management of consumption & generation
 - energy storage: batteries, appliances, electric vehicle
- **Three type of integration in market:**
 - integrate directly with each – others
 - connected to micro grid
 - group of prosumers pools resources, or form a VPP

DISTRIBUTION NETWORK PREPARATION FOR PROSUMERS INTEGRATION

Electrical Distribution Network digitalization- an important part for Prosumers integration

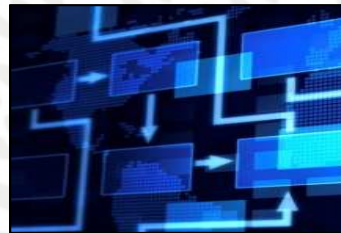
SCADA, sectionalizes & reclosers– real time technical information regarding the state of the distribution network and reduction of interruption times, creation of conditions for the automatic restoration of the power supply in the defective areas.



BENEFITS:

- Real-time knowledge of grid performance
- Remote control of assets
- Isolation of faults and limitation of outages
- Smart grid upgrades basis

SMI – intelligent metering systems are the key to real-time management of electricity produced or consumed by Prosumers



- Knowledge of electrical energy consumption or production in real time
- Elimination of reading errors
- Remote reconnection for reading
- Better detection of dis-functionalities
- Deep insights into grid performance and client consumption patterns
- Information commercialization potential in supply tariffs introduction

ELECTRICAL DISTRIBUTION NETWORK PREPARATION FOR PROSUMERS INTEGRATION ctd.

Electrical Distribution Network digitalization- an important part for Prosumers integration

GIS – Real technical information regarding the state of the distribution network in geographic context

- Reduction of customer response time
- Reducing connection time for new connection
- Faster identification of consumption place and assets by route optimization
- Visualization of asset condition/age
- Visualization of reserved capacity per transformer/ tech. unit
- Visualization of history of breakdown / damages (asset cond.)

MWM – Field team management, ensures shorter intervention times to eliminate incidents and disorders remedy, leading to reducing interruption times.

- **Administration of teams, equipment, materials based** on the given criteria (team competences, materials and equipment to be used, etc.)
- **Prioritization** of work based on given criteria
- Work orders **allocation / reallocation** to the field teams (requires SAP integration)
- **Optimize routing** (requires GPS coordinates of the teams and of the work order)
- **Tracking** the activity in the field by closing the work order from the mobile device and transfer to SAP in real time
- **Electronic documentation of works**

ROMANIA: MAIN REGULATORY TOPICS IN FORCE AND NEW PREDICTIONS FOR REGULATORY ENVIROMENT

- **Smart Metering Regulation** (Rollout plan 2017-2020) – in order to be approved
- **Binomial tariffs simulation period**–The impact analyses of binomial tariffs simulation for 1st semester – in progress
- **Distribution tariffs Methodology** - New principles for the 4th regulatory period:
 - Reevaluation of the RAB (Regulatory Asset Base)
 - Changing the WACC annually
 - Annual OPEX corrections
 - Minimum guaranteed maintenance threshold (percentage of OPEX)
 - Limiting profit from other regulated/ unregulated activities to 5%
 - Eliminating the working capital (NFRR)
- **New procedure** for investment plan approval applied for starting with 2017 ; Investments will not be recognized into distribution tariffs if it does not fulfill the provisions of procedure
- **New draft Order** regarding the tariff for prosumers
- The energy delivered into the network by the prosumers will be purchased by DSO at regulated price for covering CPT – an increase in the number of prosumers is expected

DSO FOCUS IN IMPROVING THE RELATIONSHIP WITH CONSUMERS BY INCREASING THE QUALITY OF THE DISTRIBUTION SERVICE

- Reducing network connection time for users;
- Reducing DSO costs with impact in distribution tariffs:
 - Smart investments;
 - Efficient maintenance;
 - Reducing technological losses;
- Improving the way consumers are informed about planned and unplanned interruptions;
- Reducing the duration and number of interruptions



THANK YOU FOR YOUR ATTENTION!



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