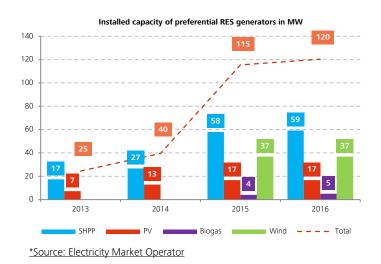


The Role of DSO as Facilitator of the Electricity Markets in Macedonia

Key aspects and considerations

30th of May, 2017

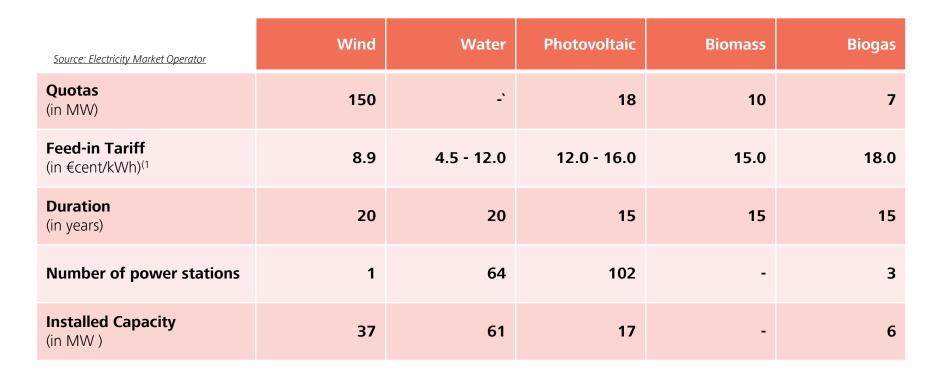
Renewable Energy Production in Macedonia (1/5) Supportive Measures





- → Clear commitment for support of RES through policies set in country's RES utilization strategy
- → RES generators obtain status of preferential electricity producers
 - Guaranteed procurement of generated quantities;
 - Feed-in tariffs;
 - No balancing responsibility (MO as BRP);
- → Grid Connection of Preferential Producers
 - Fair connection charges;
 - Involving producers in grid analyzing and sharing of network data;
 - Priority status in dispatching activities;

Renewable Energy Production in Macedonia (2/5) Status in Facts and Figures



1) Feed-in tariffs for water vary depending of the total annual production, while for photovoltaic vary depending of the installed capacity (± 50 kW)

EVN

Renewable Energy Production in Macedonia (4/5) Market Aspects

- Market Operator purchase total electricity produced by preferential producers
- Preferential producers do not have balancing responsibilities
- Market operator is obliged to compensate the costs for balancing of preferential producers to TSO
- Suppliers and traders are obliged to purchase electricity from Market operator:
 - Quantities of electricity are equal to the share of their nomination in whole electricity needs of customers in the country
 - The prices are calculated by the market operator at the end of each month as average price that market operator has purchased from preferential producers increased by the costs for balancing occurred at the same month



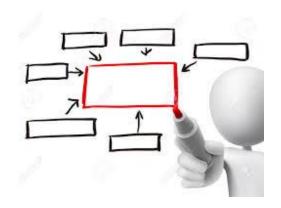


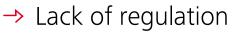






Renewable Energy Production in Macedonia (5/6) System Integration & Future Challenges





- New market value approaches,
- Self-consumption aspects,
- Demand-response
- Appropriate grid tariff system
- RES power plants have difficulties to operate solely on the open market
 - Forecast;
 - Imbalances;
 - Market based products;
- Aggregation of RES to increase market competitiveness



Electro-mobility (1/2)



Promoting electromobility



- Promotion and integration of electro mobility with the Winter package proposal
 - DSO should cooperate with any other undertaking that owns, develops, operates and manages recharging points for electrical vehicles
 - DSO may be allowed to own, develop, operate, manage recharging points if there is no interest by other parties after the tendering procedure and the regulatory authority has granted its approval



- \rightarrow Open issues for the countries in the region
 - Small & economically week markets
 - Substantial infrastructure support is needed for super charges
 - No interest until now due to the large investments
 - At the beginning who else except DSO?

Electro-mobility (2/2) Status and challenges





- → No specific coverage of "EV Charging Stations" in the legal framework
- → First steps initiated
 - Joint project: EVN and the City of Skopje & Public Parking Company;
 - To be installed on 6 locations (dedicated public parking space);
 - Free of charge: promotional phase;
 - Coordination with the Regulator
- → Future challenges:
 - Regulation;
 - Build, Own & Operate
 - Pricing;

DSOs and the Energy Winter Package (1/3) SoLR challenge





- Pushing for market-based supply pricing with possibility of public intervention for vulnerable consumers:
 - What is the role of SoLR?
 - Instead to be market facilitator it is more used as public intervention for all customers and playing role as regulated supplier?
 - Mainly nominated incumbent supplier or DSO, struggling with depreciated prices
- → Revising the concept of SoLR
 - To be nominated after the tendering procedure and transparent conditions
 - To provide universal service in case of the fail of supplier,
 - Prices to reflect real costs and to accelerate selection of a new supplier

DSOs and the Energy Winter Package (2/3)



Challenging technical and socio-economic aspects



- → Consumers are becoming active market players
 - May enter into dynamic pricing contracts,
 - May enter into agreements with demand response providers and aggregators,
- → Providing access to smart metering
 - Increased investment vs. affordability
- → Reaching cost reflectiveness of DSO tariffs
 - Attracting investments
 - Appropriate customer signals
 - Self-consumption
- → Developments and Investment plans
 - Inclusive process with current and potential market players
 - Clear commitment by DSO and Regulator



DSOs and the Energy Winter Package (3/3) What needs to be done?





- Selection of SoLR upon transparent tendering procedure to facilitate electricity market development
- Price affordability vs definitions and mechanisms for vulnerable customer protection
- Developing consistent pricing methodologies for system operators (self-consumption considered)
- → Cost-coverage
- → Appropriate regulation (electromobility, RES market schemes, demand-response, aggregation of RES)