



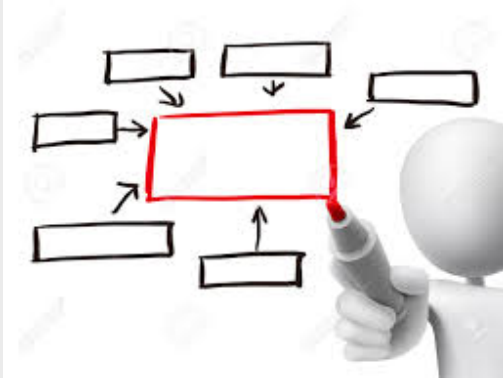
**New Challenges for Distribution System
Operators
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ECDSO-E**

Current:

- **Quality of service**
 - **Ageing infrastructure**
 - **Underinvestment**
- **Integration of distributed generation**
- **Smart metering and data management**
- **Imbalance settlement data provision**
- **Market facilitator**
- **Cost reflectivity vs affordability**
- **Distribution losses**

New:

- **Self consumption**
- **Non-frequency ancillary services**
- **Demand response**
- **Storage facilities**
- **Integration of electro mobility**
- **Entitlement to a dynamic price contract**



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

Self-consumption – Key aspects

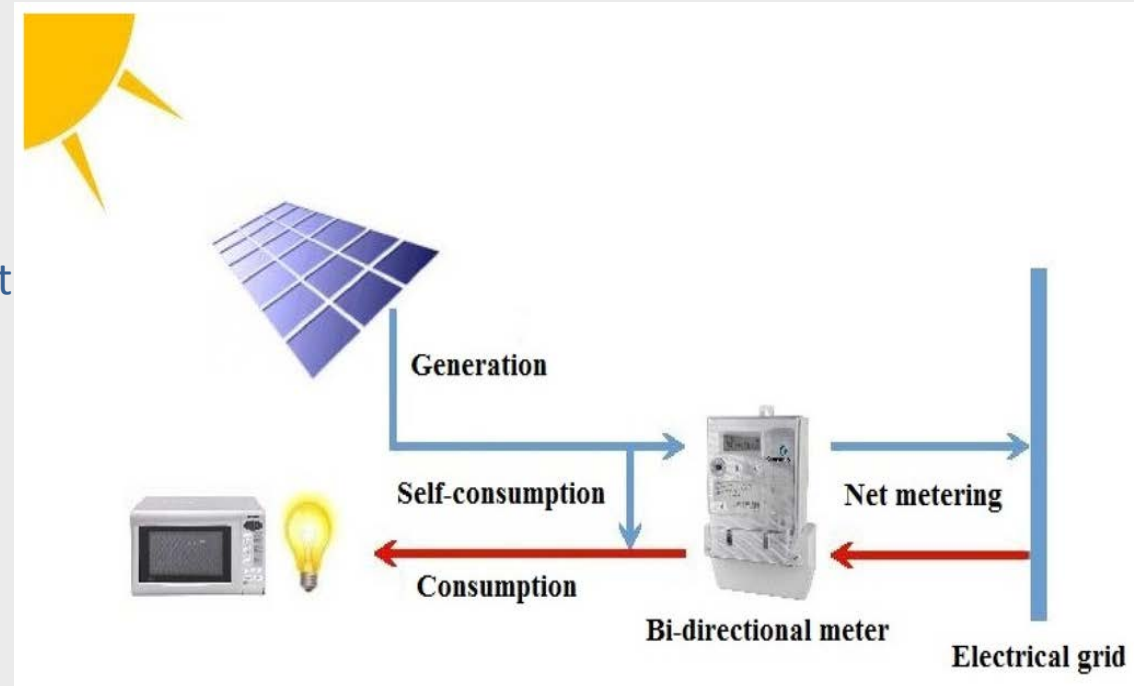
- **Definitions**
- **Technology and capacity criteria**
- **Self-consumption schemes**
- **Value of excess energy**
- **Grid costs recovery and cross subsidization**
- **VAT and other public taxes**
- **Other taxes and levies**
- **Imbalance settlement**
- **Grid Connection**

ECDSO-E Self consumption – Position paper

https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/4698404/50AA7520BDD32388E053C92FA8C001F3.pdf

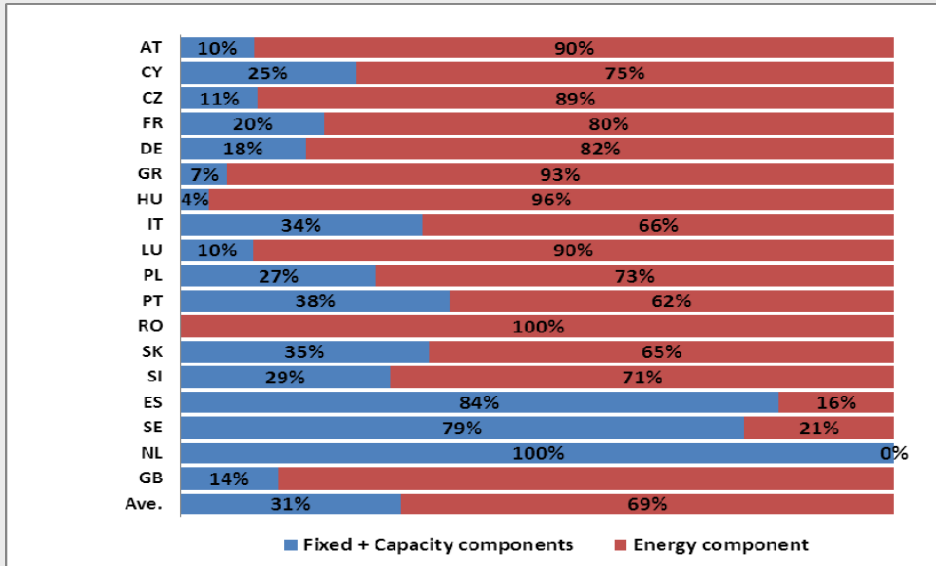
Self-consumption schemes

- Commercial arrangement
- Net metering
- Net billing

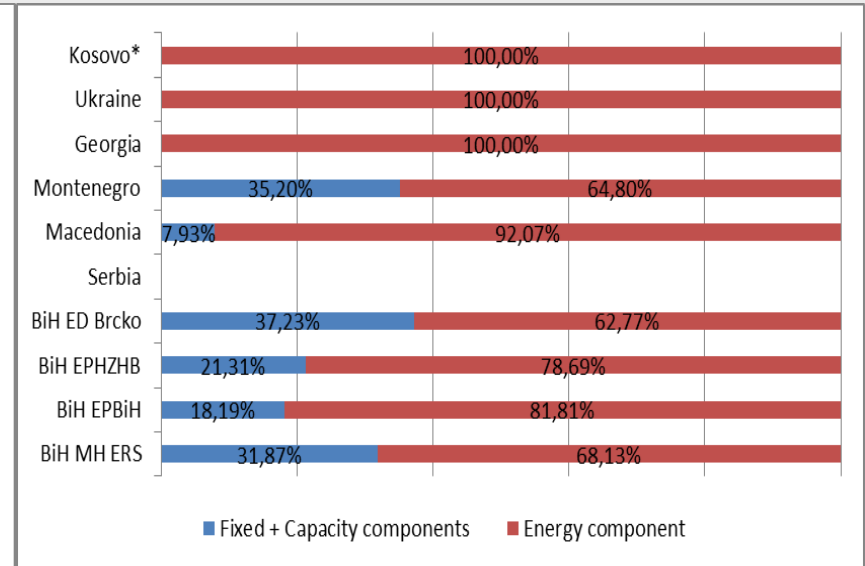


Grid costs

- Grid costs mainly driven by the system capacity
- Distribution grids are still dimensioned as if there is no self-consumption
- Cross subsidization among consumers' categories caused by self-consumption
- DSO cost recovery
- Volumetric grid tariffs generally used instead of the capacity based tariffs



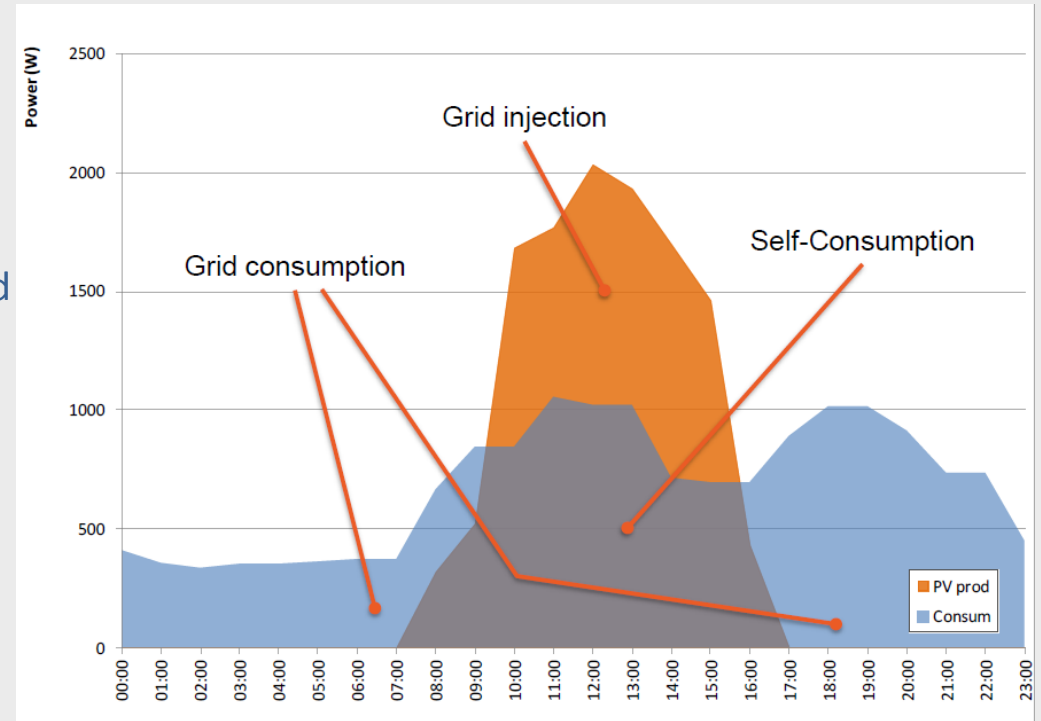
Source: European Commission, Directorate General for Energy
Distribution Tariff component weight in Households (EU)



Source: Energy Community Secretariat database
Distribution Tariff component weight in the Energy Community

Self-Consumption Imbalance settlement and Grid connection

- Household and small commercial consumers generally modeled by standardized load profiles
- Load profile altered by Self-consumption
- Network code on requirements for grid connection of generators
- "Type A" DG units
- Two electricity meters needed in self consumption installations



Prosumer's daily profile

....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....

- ***Open issues for the countries in the region***
 - Small & economically weak 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?***





- **No specific coverage of “EV Charging Stations” in the legal framework**
- **Joint project: EVN and the City of Skopje & Public Parking Company**
 - To be installed on 6 locations
 - Free of charge: promotional phase
 - Coordination with the Regulator
- **Future challenges:**
 - Regulation
 - Build, Own & Operate
 - Pricing

....Pushing for market-based supply pricing with possibility of public intervention for vulnerable consumers...



- **What is the role of SoLR?**
 - It is more used as public intervention in the price setting for all customers and playing role as regulated supplier?
 - Mainly nominated incumbent supplier, in non-transparent procedures and struggling with depreciated prices
- **Revising the concept of SoLR in SEE**
 - To be nominated in transparent and non-discriminatory way
 - To accelerate selection of a new supplier and to not impede free choice of supplier
 - Easily and clearly comparable, transparent and non-discriminatory prices





.....Consumers are becoming active market players with dynamic pricing contracts, agreements with demand response providers, contracts with aggregators and Generate & Store electricity....

- **Providing access to smart metering**
 - Minimum technical and functional requirements
 - Investment, cost benefit assessment, affordability
- **Cost reflectiveness of DSO tariffs**
 - Attracting investments
 - Appropriate customer signals
 - Self-consumption vs grid tariffs impact
- **Developments and Investment plans**
 - Inclusive process – involved potential market players
 - Clear commitment by DSO and Regulator
 - Affordability





- *DSOs new roles, tasks and costs to be adequately recognized and reflected in tariffs*
- *Cost reflectivity and affordability should not be conflicting objectives*
- *Flexible tariff design and DSO involvement in decision making process*
- *Recognition of DSO's expertise and knowledge*
- *Position of DSO in the new environment to be strengthened through structured format of cooperation*