

Tariffs

Cost allocation of grid tariffs is very essential for providing quality of supply

- More than 90% capacity costs → demand charge?
- Demand charge based on metered demand and/or fixed level?
- Different connection points of customers in different grid levels (0,4 kV up to x kV) → different maintenance costs and tariffs
- Different levels of metering (LV, MV, HV) → grid losses to be covered
- Energy prices considering time of use (PT, HT, LT, ...)
- Seasonal differentiation (summer, winter)
- Additional fees to cover higher costs of feed-in of renewables
- Reactive energy: limit, price for exceeding volume

- Widespread high financial engagement of grid operators absorbs significant ratio of investment capacity and neglects cost allocation
- Grid operator should be able to organize cost sharing by local applicants
- A special connection fee as contribution to frequently upgrade the upstream system in capacity is very useful to comply with investment needs
- Consider reasonable connection fee for (rising number of) decentralized generation

These are requests towards Regulatory Authorities and should be initiated and supported by Energy Community and ECRB.

Clearing and Load Profiles

The energy clearing process is essential for system stability and economic sustainability

- The equal treatment of suppliers (incumbent or local player and newcomers) is important for the economic stability of the system
- The transitional problem of missing metered load profiles for each metering point is inevitable
- Provisional solution: standardized load profiles
- This causes a gap in equal treatment of suppliers:
 - Newcomers are “pan-caking” standardized profiles and are not exposed to real load
 - Incumbents have to balance all differences also caused by wrong and missing data of energy flow.

DE/AT:

- Household (2 acc. Consumption)
- Business 7 different
- Farming 3 different

AT additionally

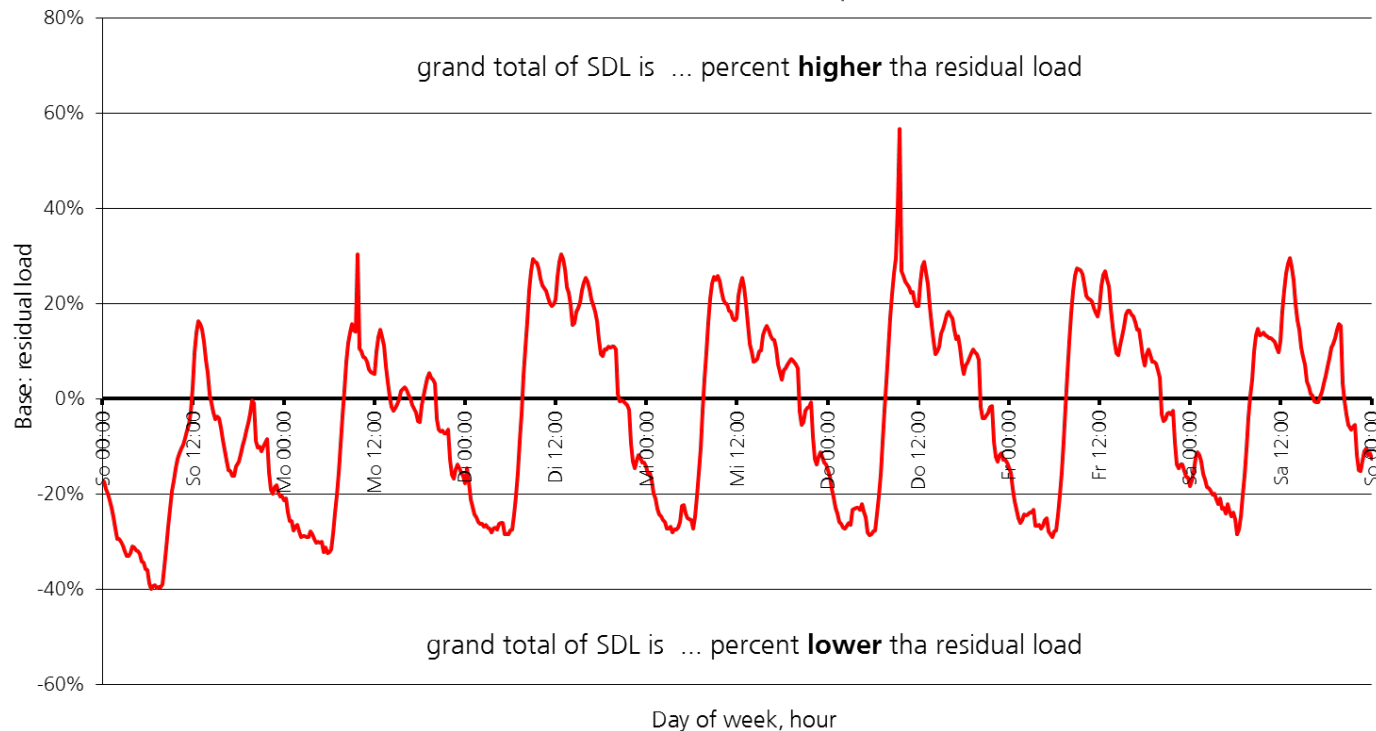
- Small generation units 2 different for PV, hydro, wind biogas
- Interruptible supply (ripple control system switching store heating, hot water storage, heat pumps, etc.)

Details for Austria available in English:

<https://www.e-control.at/documents/20903/-/-/90219f4d-ba76-41d6-948f-3d82c82a42e3>

High deviation between standardized and real load profiles on the level of the whole distribution grid

grid load: comparison of the residual load with the lump sum of all standardized load profiles



- ▶ Metered Load Profile for customers with half – indirect (5A) meters
 - Middle Voltage Customers
 - Low Voltage Customers – I Tariff
- ▶ Standardized Load Profile (simple “peak”/”off peak” shape) for customers with direct meters
 - Low Voltage Customers – II Tariff
 - Households
 - Street lightning
- ▶ Maximum flexibility in regulation to change from SLP to MLP
 - Load profile determined only by technical preconditions (metering)
 - DSO should have the right to define minimal technical characteristics of the metering equipment



Possible Step 2

- ▶ Analysis of the technical preconditions for introduction of Metered Load Profiles also for smaller customers
 - installation of new meters
 - MDM software
 - on-line communication
- ▶ Analysis of the scope of needed investments to fulfil technical preconditions
 - strategic fit
 - budget planning
 - funds
- ▶ Coordination with NRA to provide revenue including sufficient investment funds



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- Meter data system to manage time series and provide relevant (register) data to the billing system
 - Organization of the meter reading process, ensuring correct validated data within the time limit
 - Overcome the technical communication with the meters: define requests for future ITC-structure
 - For the investment program you have to calculate the overall system including all hard- and software
 - Adapt and gradually lower the threshold of MLP in accordance with the NRA
 - Establish data exchange rules and data formats in time
 - Consider a realistic realization period