Determining an Uniform Tariff for Several DSO's

Case Study by Austria

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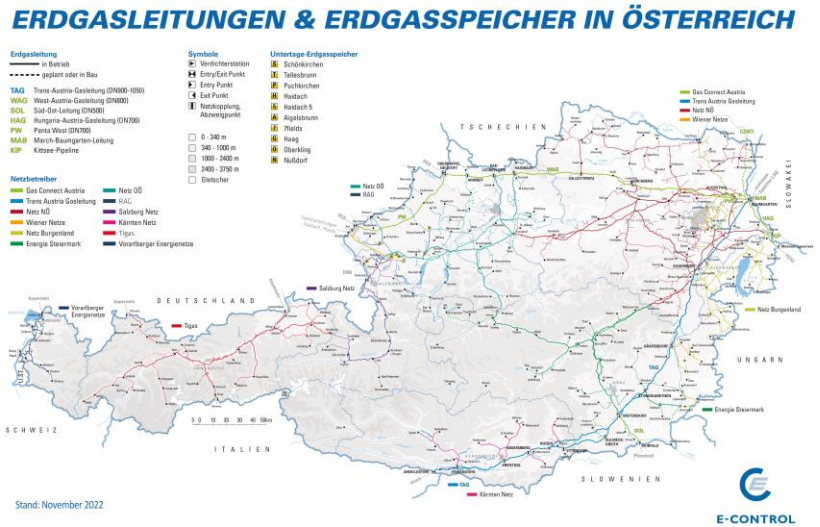
Tariff Uniformity

Information about the Distribution Network

- Length: ~44.000 km
- 19 Distribution System Operators (DSOs)
- 9 different network areas (federal states) and 9 corresponding tariffs.
- 3 market areas: East, Tyrol and Vorarlberg
- 3 distribution network levels: level 1 supra-regional, level 2 and 3 local level and directly to consumers.



Source: E-Control, own illustration

- Consumption category on network level 3 vary from industry/commercial consumers or households to commercial consumers with different metering devices.
- Different tariffs: network utilisation charge, network access charge, network provision charge, charge for metering services and charges for other services.
- Network utilisation charge depends on areas, levels and consumer category.

Tariff Uniformity

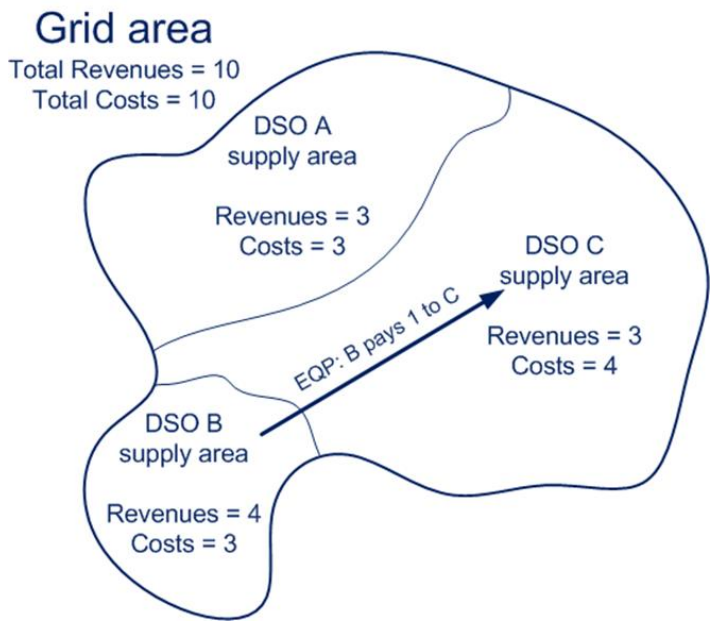
Concept & Implementation

Concept

- DSOs have different numbers and consumption pattern of consumers (e.g. industry, SME and households) and thus varying revenues.
- DSOs have divergent costs (age and size of the network, connection obligation, etc.).
- A uniform tariff ensures fairness and equality for all consumers in one network area (federal state).

Implementation

- Determine allowed costs and identified volumes for DSOs.
- Sum up all costs and volumes in one network area.
- Determine the uniform tariff in one network area.
- Compensate other DSOs (similar approach for TSOs).



Source: E-Control, own illustration

Tariff Uniformity
Calculation

Input data for tariffs: Level 1

Indirect costs

- Distribution area costs AGGM
- Upstream network costs
- GCA (TSO) costs

Per market area

East
Tyrol
Vorarlberg

Indirect revenues

- GCA (TSO) revenues

Direct costs

- Distribution network costs

Per federal state

Direct revenues

- Feed-in / Feed-out
- Network utilisation charge storage
- Cross-border storage utilisation
- Network utilisation charge production

Tariff Uniformity

Calculation

Input data for tariffs: Level 2/3

Direct costs → per federal state

- Distribution network costs

Identified volumes → per federal state

- 3-year average

Tariff Uniformity:
Cost Cascading

Per market area → Per federal state

Cost cascading formula

Indirect costs and revenues

- Distribution area costs AGGM

100 % Identified volumes

- Upstream network costs
- GCA (TSO) costs, revenues

50 %
- 30 % Identified volumes
- 70 % Peak load (per hour)

50 % Network interconnection points quantities

Tariff Uniformity

Cost Cascading

Level 1 → **Level 2/3**

Indirect costs, revenues
↓
Per federal state

- Distribution area costs AGGM
- Upstream network costs
- GCA (TSO) costs, revenues

Direct costs, revenues

- Distribution network costs, revenues

Level 2 → **Level 3**

Direct costs, revenues

- Distribution network costs, revenues

Cost cascading formula

100 %	Identified volumes

30 %	Identified volumes
70 %	Peak load (per hour)

Tariff Uniformity

Input Data for Tariffs

Cascaded costs → Per federal state

- Level 2
- Level 3

Identified volumes → Per federal state

- Level 2
- Level 3

- **Standardised tariffs** per network area (federal state)
- **Fixed** and **variable** part - per amount of energy and capacity / flat rate
- At level 2 in zone A to F depending on consumption
- At level 3:
  - **Zone 1 to 4** depending on household consumption
  - **Zones A to D** depending on the consumption of small businesses

Tariff Uniformity

Compensation payments between the network operators

- Yearly roll-up of costs and volumes of DSOs.
- Tariffs defined in annually amended Gas System Charges Ordinance
- Example for Upper Austria on level 3

Netzbereich Oberösterreich Ebene 3

Verbrauch [kWh/a]		Arbeitspreis [Cent/kWh] gem. Abs. 5	Arbeitspreis [Cent/kWh] gem. Abs. 6c		Pauschale pro Monat [Cent]	Leistungspreis [Cent/kWh/h] gem. Abs. 5	Leistungspreis [Cent/kWh/h] gem. Abs. 6c
0 ≤ 40.000	Zone 1	2,1517		Staffel 1	400		
>40.000 ≤ 80.000	Zone 2	1,4798		Staffel 2	400		
>80.000 ≤ 200.000	Zone 3	1,2061		Staffel 3	400		
>200.000	Zone 4	1,1542		Staffel 4	400		
0 ≤ 5.000.000	Zone A	0,4407	0,6611	Staffel A		799	3,2836
>5.000.000 ≤ 10.000.000	Zone B	0,1888	0,2832	Staffel B		799	3,2836
>10.000.000 ≤ 100.000.000	Zone C	0,0741	0,1112	Staffel C		799	3,2836
>100.000.000	Zone D	0,0741	0,1112	Staffel D		799	3,2836

Source: Gas System Charges Ordinance

- Compensation payments also defined in this Ordinance and paid monthly.
- Example for Upper Austria (in 1.000 EUR)

	Empfänger		
Zahler	Linz Netz GmbH	eww ag	Energie Ried GmbH
Netz Oberösterreich GmbH zahlt an	2.716,4	639,9	768,5
Stadtbetriebe Steyr GmbH zahlt an	188,9	44,5	53,4

Source: Gas System Charges Ordinance

THANK YOU FOR YOUR ATTENTION!

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